

The National Locksmith®

TheNationalLocksmith.com

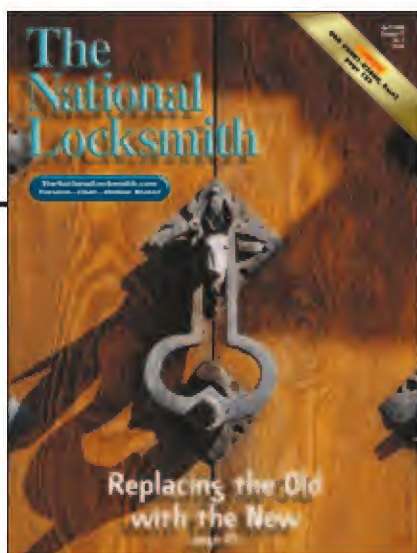
April 2000
Volume 71
No. 4
\$5.00

CODES!
GEO U0001-U2000, Part 1
page 122



Replacing the Old
with the New
page 20

On The Cover...



Old doors and hardware may be intricate and have characteristics of antiquity, but new is certainly more functional and secure.

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COMMENTARY



Install Security and Prosper!

I'm sure you've noticed that gas prices are up and up and up lately. Locksmiths in the forums at TheNationalLocksmith.com have been discussing whether or not to raise trip charges to account for the increased expense. A number of locksmiths already report that they have raised the service call from three to five dollars. Those who have commented believe that they have seen little or no customer resistance to the increase.

The gurus who analyze such things say that due to the lessened supply, gas prices are expected to rise even a bit more fairly soon. Then, due to an agreement by oil nations to produce more, the cost should begin to come back down.

While the increased cost of fuel affects locksmiths, many other factors also influence your own personal economy. I think that one of the surest ways to help improve your own earnings is to bring new products and skills to the mix of your current ones.

Some of the most successful locksmiths I know are those who have done well with high security locks. As commercial and even residential customers attempt to gain better key control, restricted keyways offer the best mix of additional security plus the ability to control who can get keys made.

There are other products and services that you can also offer to bring new profits into your business. A few new sponsors to our web site come to mind because they make things the locksmith might not have thought about ten years ago, but in today's market we have to think smarter and be more aggressive than ever before.

For example, a company called TekTone (<http://www.tektone.net>) and Aiphone (<http://www.aiphone.com>) both offer commercial and residential intercom systems which are locksmith installable. Since you already install electric strikes, why not add audio and/or video intercom systems to your product mix? These are profitable systems which help your customer upgrade their security, and both companies not only offer a wide product selection for most applications, but they also offer technical help to make your job easier.

Often the most vulnerable point to attack in any situation is window glass. But what if glass could be protected, and made very resistant, without compromising its clarity? Well, the fact is that it can. ShatterGard (<http://www.shattergard.com>) is a company that makes and installs a clear, attack resistant film that applies right over the glass. It renders the glass so hard that you can barely chop through it with an ax.

Another overlooked area for better security are the millions of gates throughout the world. Gate locks can and should be used on parking lots, swimming pools, tennis courts, storage cages, play grounds and in many other applications. A company called International Locking Devices, Ltd. (<http://www.gatelock.com>) makes a variety of locksmith installable security devices for most any installation.

When I was a kid, if you wanted to buy a lock, you bought it from the locksmith. But then again, if you wanted to buy a cake, you bought it from the baker, you bought flowers from the florist, and you bought meat from the butcher. Today you can buy those items all in the supermarket. As locksmiths we should look at the overall security picture to see where we can better specialize to make additional profits. Install security and prosper!



Have questions? Want free technical help?
Free Locksmith Forums!

www.TheNationalLocksmith.com

Marc Goldberg
Publisher

April 2000 • 5

Mango's Message

There is no doubt that the Internet will play an ever-increasing role in our lives as time goes on. If you are a football fan and watched Super Bowl XXXIV this past January, it was very apparent that the world as we once knew it had changed. For the first time ever, there were almost as many dot-com (.com) Internet advertisers than the conglomerate behemoths that we have all come to know and love. The largest television viewing audience for any single event had witnessed the preliminary passing of the torch. And if you still weren't convinced that the Internet is, and will continue to be the single biggest entity to emerge in the last 50 years (excluding Microsoft) the purchase of Time Warner, (the largest publishing and entertainment mogul in the world) by America Online (the largest 15 year young Internet service provider in the world) should have convinced you.

With each passing day hundreds of new e-commerce (electronic-commerce) web page sites are appearing, offering everything imaginable... and even some things unimaginable. Even for those not yet connected to the World Wide Web, the Internet has something to offer. As a marketing tool it can certainly prove to be invaluable, because it offers inexpensive global presence which may otherwise not be possible.



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Click4Services.com

Free Internet Presence

recognition is where us little guys need help, and that's where a new Internet search engine called Click4Services.com may be able to help.

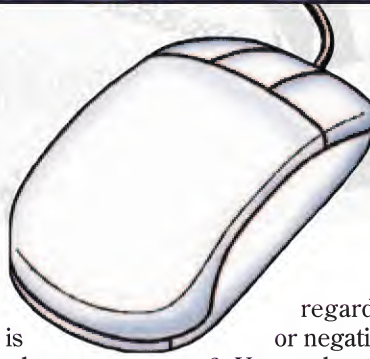
Click4Services.com is a new Internet site that allows consumers to locate, evaluate and schedule service calls with local businesses. Click4Services.com provides an alternative way for service contractors such as locksmiths, electricians or plumbers for example, to attract new clients in their local area via the Internet.

Steven Brodsky, President & CEO of Click4Services.com, developed the site to overcome the major hurdles facing small businesses jockeying for a presence on the Internet. The goal is to become the number one destination for consumers who want to arrange for household services. When a consumer enters a ZIP code at Click4Services.com or any of its sixty websites such as Click4Locksmiths.com, they obtain access to local business members. Results include the business affiliations, guarantees, experience and service hours. Consumers can also request references, print discount coupons and learn about the experiences that other consumers have had with the business, as well as add their own opinions on the quality of service received.

The Click4Services.com search engine does allow for your business to be the first search result in its category and geographic

Greg Mango
Editor





location. However, this is established on a first come first serve basis. The first one to purchase the service is the first one listed in the chosen category. Non purchase members are randomly selected in the search, even when a ZIP code is entered. The cost attached to this membership is determined by the county you service and will vary based on population. Current estimated fees are \$100-\$150 for a small county and up to \$650 for a large county.

One intriguing aspect of Click4Services.com is you do not need a computer or Internet access to take advantage of the service. Interested companies can sign up at the Click4Services.com website or by calling toll-free (877) 254-2549. Click4Services.com is giving away \$5 million worth of high visibility listings to the first 10,000 businesses that apply and qualify, and locksmiths qualify.

Application Process:

To process an application, Click4Services.com must receive copies of your applicable license(s) and liability insurance certificate(s). Submit the required documents by fax to (888) 522-6154. Also prepare at least three client references that can vouch for your professionalism, quality of work, honesty and integrity. These are made available to consumers that request them.

Legal Background Check:

By submitting an application you give authorization to Click4Services.com to obtain business background information from a reporting agency for the purpose of determining the acceptance of your application. Click4Services.com assures that any information obtained will be kept confidential, and will not be disclosed to third parties except in the form of a generalized 'approval rating' displayed within the search result record. A credit and judgement report will be ascertained by Dun & Bradstreet (D&B) and arrangements are also being made with the Better Business Bureau (BBB).

Terms of Membership:

By submitting the application you are legally bound that the information submitted is correct and true to the best of your knowledge and agree to the terms of membership set forth:

1. You agree to provide prompt, courteous and high-quality service to customers referred through Click4Services.com.
2. You proclaim that to the best of your knowledge your company has not been held liable for damages resulting from work performed.
3. You understand that your membership may be terminated for excessive complaints and/or substantiated negative comments received by Click4Services.com.
4. You certify that your company can, and will, service all counties selected in the service area field.
5. You understand that Click4Services.com reserves the right to publish on the site all consumer comments

regarding your business, whether positive or negative.

6. You understand that Click4Services.com reserves the right to reject any listing or request category/territory changes for any listing.
7. You understand that your listing (and its position) will appear at the sole discretion of Click4Services.com.
8. You agree to indemnify and hold Click4Services.com harmless from any claims made by third parties arising from work or services provided to such parties.

Click4Services.com is said to launch a multi-million dollar advertising campaign starting this spring. When asked how much was earmarked for that campaign and where it was directed, Brodsky said \$10-\$20 million was earmarked for print, radio and Internet advertising.

Now that we have outlined the good points about Click4Services.com, one must ask what is the downside?

First, this is a new Internet company with no track record to review past progress, developments or financial stability. Whenever you invest in a new venture it is a gamble. You may hit the jackpot or you may lose it all.

When the topic of membership expenditures was addressed, firm judgements did not appear to be finalized as of yet. Population was a factor, but did not seem to be the only factor. In all fairness, I did not specify a given county as an example in my request, so I may have been given a firm price had I done so.

When I spoke with Steven Brodsky about the advertising budget, it was my impression that the \$10-\$20 million number was arbitrarily selected. However, Brodsky did state that Click4Services.com was financially supported by a venture capitalist and was serious about its future growth.

As with any listing company, even the Yellow Pages, there is no guarantee that it will yield any results. If it doesn't, you are not entitled to a refund.

My suggestion to you would be to take advantage of the free membership listing while available. This will place you on a random search, but at least you will have a presence. You may not know it, but many of you are already listed, complements of the Click4Services.com developers. As for becoming a paid member with a geographic location, that decision you must contemplate.

The success of this company and ultimately the return on your investment hinges on the aggressiveness of its advertising/marketing campaign. The Internet of today is far too large to assume that customers will stumble across you. It mandates self promotion or your efforts will be lost in a complex maze, never to be seen or heard from again. The more Click4Services.com expends on advertising and marketing, the greater its success as well as your exposure will be.

As with any business, image, presence and recognition is everything. **TNL**

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Schlage Encounter

I had an interesting encounter with a commercial Schlage deadbolt today. I needed two Schlage single cylinder deadbolts for a job in a 626 finish. I needed them quickly and didn't have time to go to my regular supplier so I stopped at Home Depot and got two 260 Schlage deadbolts. When I arrived at the job site, I told my son that I would key them for him while he drilled the doors. To my great surprise when I opened the carton the Schlage deadbolt was an exact copy of the Master single cylinder deadbolt housing. Guess it shouldn't surprise me since the Master line was discontinued when Schlage bought Master. The positive side is that I still have many Master deadbolt cylinders which will apparently still be usable for Master keyways and the other composite keyways that Master had available.

Ed Humes
Oklahoma

Schlage/Master/Dexter

When Schlage acquired Master/Dexter they bought back all of the Master/Dexter merchandise from the Home Depots. I always wondered what they did with it. Now we know! Falcon has been part of the Ingersoll-Rand Architectural Hardware Group since they bought out Newman Tonks in 1997. This group also includes Dor-O-Matic, Glynn-Johnson, Ives, LCN, Locknetics, Monarch, Schlage, Von Duprin and who knows what else. Since the emphasis is on the bottom-line, I'm sure we'll see even more consolidation in the future with many identical goods cross-marketed under different brand names to reduce costs.

Peter P. Schifferli
E-Mail

Gouging the Customer

The National Locksmith did a great service by implementing this Internet forum for all of us locksmiths. What we need to do is set up an alliance of locksmiths that are lead by an entity to go against the disservice to consumers from the automobile industry. Many of the year 2000 cars require units that cost 1,500 to 3,000 to replace a key if lost or stolen. I'm a locksmith that is trying to help people in time of need. Losing a key and having me make a replacement is heaven sent to a car owner. But not when the bill is 1 to 3 thousand dollars.

Robert Bradley
E-Mail

Do it Right

First thing Monday morning I get a call to help a lady with a 1995



Cadillac who had misplaced her keys at a local motel. When I arrived I called GM and received codes in no time flat. The door key code would not produce a key to work the door. After some discussion with the owner I learned she had the locks changed after the car had been stolen and recovered. She said a Cadillac dealer did it.

My first step in making a key was to read the wafers in the glove box lock. I looked several times and could only see three wafers. I disassembled the lock and guess what, there were only three wafers in the lock. To say the least this made generating a key a much larger task.

Have you ever rekeyed a vehicle and done something like this? I hope not. It's a big enough job to have to generate keys for this car, but to be sabotaged by someone else adds insult to injury. I really doubt a Cadillac dealer did this re-key job. They usually just change out all the locks, which would have left all 4 wafers in the glove box. I suspect they sub-contracted this out, but I

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1533 Burgundy Parkway
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Attn: Editor

could be wrong. I sure hope all of us have enough respect for this profession to do the job right.

*James K. Stevens, Jr.
E-Mail*

Prize Winner

I received the February issue of The National Locksmith and was pleasantly surprised to see that I had won a very nice key punch machine. Please accept my humble thanks for providing many opportunities for locksmiths to grow and develop as individuals and as a trade.

Now I have just one problem. It was the next day before I could get out of the house because my head had swelled so big.

*Leo Koulogianes
E-mail*

Take It or Leave It

I received a call on a late Sunday afternoon as I was watching golf on TV, from a frantic realtor who lost her tenants keys and the movers and tenants waiting outside were getting antsy.

I told the woman I'd be there within

10- minutes. The call was five minutes from my home. Five minutes later I was less than two streets away and my cell phone rang with the woman now concerned with the price. In retrospect I let my guard down, as I shouldn't have answered the call (I have caller ID on my cell). She asked how much this service would cost and I told her it would only be a service call charge of \$75 and I would see her in less than a minute. She replied that after calling me out she called out another locksmith from the other side of town and he quoted \$50. I paused and repeated that I would see her in a moment.

I arrived and explained to the woman that I had already fulfilled her request to show up quickly and it was \$75 plus tax. She said no thanks and she would wait for the other guy whom is a friend of mine as well as a competitor. Be assured I made 100% sure that she would indeed be waiting for the other guy.

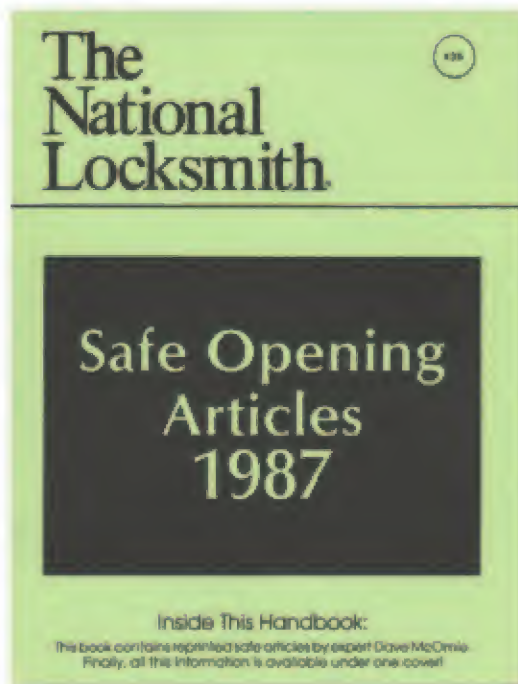
As I left I waited across the street just to see who was gonna beat this woman to death first, the angry tenants or the freezing furniture movers eyeing her. I shrugged and headed home to finish watching Tiger Woods make more money in an afternoon that I made last year.

On the way home I called my friendly competitor to inquire why he was quoting weekday rates on a cold Sunday afternoon. He responded that he didn't realize that it was even Sunday (hey, I've answered the phone with "Locksmith, good afternoon" at 3 am. He called her to let her know it was gonna be at least \$75 to come out. She said no thanks.

Meanwhile she was continuing to shop around for the best price. I know this because I have two businesses in this area and she actually called my second line to come out for her. Not recognizing my voice, I informed her it would be \$100 plus tax. She said nevermind and hung up. She then actually called me back five minutes later at my first number (again) not realizing I was one of the first two guys she called out. I told her if she would be a dear and wouldn't mind waiting a 1/2-hour I would do it for \$25. "OK, but hurry" When I asked her "by the way, have you called anyone else today?" she replied "nope."

A 1/2-hour later, my phone is ringing off the hook asking my voice mail if I'm on the way. Due to the tears

Safe Opening Articles 1987



Now under one cover—all the information safe opening articles by expert safeman, Dave McOmie.

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#SA - 1

of laughter in my eyes I just couldn't make it to the darn phone to answer it.

Am I on the way? Not for \$25 I'm not. The golf game was now over. The first call occurred over an hour earlier and during the many commercials on TV. I managed to call and say "hi" to a few nearby friendly competitors to apprise them of the past hours events.

Finally, she stopped calling and obviously either met with an untimely death or at least a severe beating at the hands of some livid furniture movers.

The moral here boys and girls is this: For every person like this that wants to beat you down in price, there are at least a dozen more nice people out there willing to pay you a reasonable price for outstanding service. Early last year I raised my service call from \$40 to a standard \$50. Guess what? My business improved. Three of my nearest competitors soon followed my lead with the same results. My advice is don't cut yourselves short.

As a post script, I talked to a friendly competitor late tonight who told me he ended up going out for her 1-1/2 hours

after she first started calling around and charged her \$75 plus tax.

Anthony Scalia
E-mail

In Memory of Charles D. Hamilton, 1924-1999.

We received word that Charles D. Hamilton, 75, a retired regional manager for Curtis Industries, and owner/operator of B&H Sales, died in November. He had been with Curtis for 26 years, serving the locksmith trade in several states.



Surviving are his wife of 51 years, Bennie Hamilton; daughter Susan and her husband, Les Young; sisters Mildred Reily and Marie Manire; and grandchildren Tanner Young and Tyler Young.

Road America Nightmare Part II

This is in regards to a letter in the January 2000 issue of *The National Locksmith* by Wayne's Lock & Key in North Carolina concerning the Road American Motor Club. I am having the same problem collecting as you are. On February 27, 1999 I did a service call for them. I charged \$50.00, which they authorized me to charge by phone. On April 27, 1999 I made two service calls for them which were longer trips. I charged \$65.00 for each of these trips. These amounts were also authorized by them.

On July 12, 1999 I received a payment of \$25.00 for the \$50.00 invoice, then I received one payment of \$25.00 for one of the \$65.00 invoices, after that I received \$50.00 on the other \$65.00 invoice. I have yet to see the missing \$70.00 that Road America Motor Club still owes me! I have decided that in the future, if they call me for service that I will charge the customer on the spot, give them a receipt and let Road America reimburse the customer for their expenses. I am glad to hear that I am not the only one who is being railroaded by them.

C. Gunderman
Arkansas

IC Cores: Small Format



Everything you ever need to know about
how to sell, service, install and
troubleshoot interchangeable cores!

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#ICSF - 1

TNL

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Tek-GUARD™ from TekTone®

Form and function come together beautifully with TekTone's custom-made Tek-GUARD Vandal Resistant Entrance Panels. The Tek-GUARD Series is patterned after our standard apartment entrance panel. It retains the very distinctive, modular look so popular in apartment, condominium and townhouse applications.



CIRCLE NUMBER
275

The panel and engraveable push buttons are made of solid, extruded aluminum. The Tek-GUARD Panel features louvers and faceplate combined with a perforated aluminum material to protect the speaker and microphone from damage. For even greater longevity, the speaker itself is made of weather-resistant Mylar. Solid aluminum engraveable push buttons ensure long life, and virtually eliminate cracking, peeling and wear. Up to four letter/digit combinations of your choice are permanently marked on the buttons. Post office door openers are also available.

Sieveking Products Company Unveils New Tool

Sieveking Products Company has added the new Peterson Pro-1™ tubular lock pick to its growing line of unique locksmith tools. This original tool incor-

porates changeable tip technology, to pick a wider variety of tubular locks than any other pick. The replaceable tip gives the Peterson pick an almost unlimited life.

The adjustable design is unique in the industry. The Peterson Pro-1 introduces a new picking technology, which quickly defeats tubular locks like: ACE II, Kryptonite, and Cobra. Ships with interchangeable tips, decoding gauge, and fitted hard shell case. Peterson Pro-1 picks are available for immediate delivery.



CIRCLE NUMBER
276

STI Offers Protection of Exit Signs

Safety Technology International has added the STI Exit Sign Damage Stopper to its extensive line of steel wire guards. Designed to protect wall-mounted, lighted, glass exit signs against vandalism and accidental damage. This Stopper features 9-gauge steel wire with corrosion resistant polyester coating. It measures 13.5 inches (69.8

RSR Mossberg Instant Access Safe

Designed by a veteran law enforcement officer, the Mossberg Instant Access safe is the only safe that is portable and completely secure. Features



CIRCLE NUMBER
274

include, sturdy cast metal construction, digital keypad, insert trays, extra mounting plates and a compact size that easily fits into a drawer (9" x 3" x 14").

mm) long by 10.5 inches (266.7 mm) wide by 2.75 inches (69.8 mm) deep. Installation is simple with anchors and screws provided.



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NoviProx by Cypress Computer

Cypress Computer Systems, Inc. unites the technology of HID's eProx Lock Module with a pioneer in electronic lock hardware creating the unique array of styles, finishes and features found in the NoviProx. The NoviProx is 100% compatible with the Cypress Access Point Manager and most other existing on-line systems that use HID prox cards and readers.

The NoviProx is highly economical, requiring no external wiring, electric strikes or significant door alterations. Features include up to 32 schedules, 4000 users and a 4000 event history transaction capacity.



CIRCLE NUMBER
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Stanley CB Series Door Hinge

Stanley has introduced a new hinge to its CB Series. The CECB 1900 10-wire hinge is now available for a broad range of door applications including swing clear, wide throw, concealed, slip-in and special applications. The CB Series hinges are

approved for use in 3-hour fire-rated door assemblies and are available in a 2-knuckle version.

These hinges serve a broad range of commercial applications where multiple door sensors are needed in office buildings, laboratories, hospitals and other settings. Combining high technology materials, innovative design and exceptional precision, the Lifespan CB 1900 Series 3-knuckle hinges deliver unequalled performance and stand up to the punishing use and everyday abuse of commercial and institutional applications.



Trimec Low Profile Fire Rated Strike

The Trimec ES100/F low profile electric



strike has received a 20-minute fire rating (without hose stream) for use singly with labeled hollow metal and wood fire doors installed in labeled hollow metal door frames. The ES110/F accepts a 3/4" latch, and offers 3000lbs. of holding force, all in a strike that is just 1 5/16" deep.

The ES110 has surpassed UL1034 at the highest standards for burglary resistant electric strikes, and comes with a 3-year warranty.

Secura Key Two Door Control Panel

Secura Key announced the new SK-ACP Advanced Control Panel. The unit accepts readers that have a Wiegand output with almost any card technology, including Proximity, Touch Card, Wiegand, Magnetic Stripe, Bar Code, Optical and Biometric. Each of the two doors controlled by the

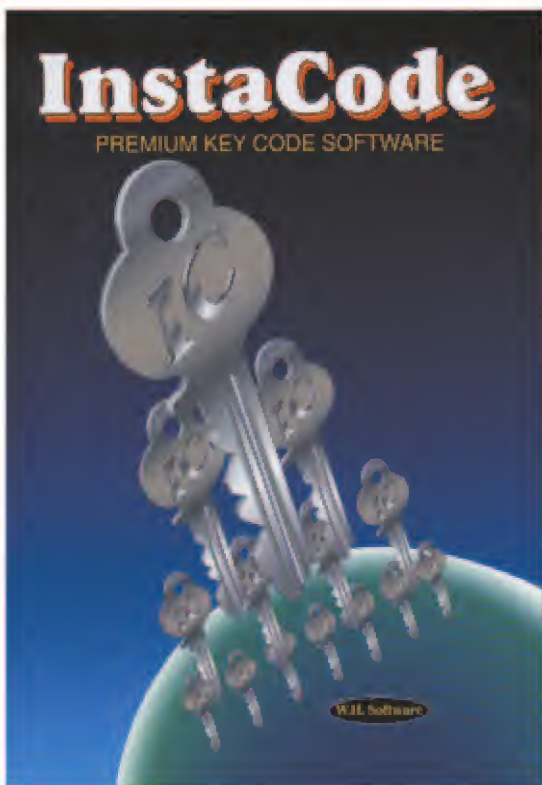
unit is independent of the other and is configured, programmed and viewed separately. Each has a separate node address.

As a stand alone, the unit may be programmed using a PC either locally or via a Modem over standard phone lines. Transaction information is stored by the unit and may be downloaded to a PC or printer.



New Rack Panel by Kouba & Associates

Kouba & Associates, Inc. has a custom engraved, stainless steel rack panel.



#IC - 2001

InstaCode

Your total code and code machine management program.



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SECURITY CAFÉ

Features can include LED's, key switches, buttons, Etc. The panel is designed and engraved to meet your specific application.



New S&G

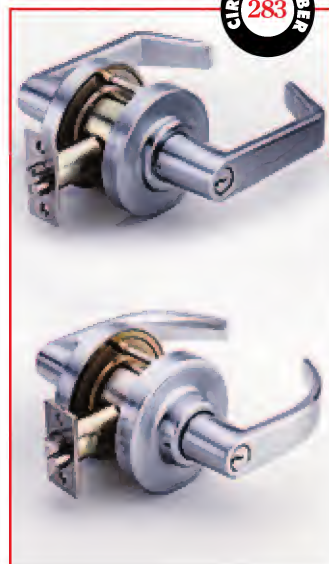
Sargent & Greenleaf Introduces New Dial Look Sargent & Greenleaf has freshened the face of an industry standard with the introduction of new dial inserts. The inserts, which will now represent the same reliable S&G products customers have come to know and trust, now offer a new look for the twenty-first century.

Simpler in design, the inserts feature a cleaner, richer look, with gold lettering on black, and a

distinctive silver line around the edge. The new dial inserts will become the standard for both key locking and non-key locking convertible dials.

Marks USA Survivor Series Locksets

For retrofit applications, Marks



USA Survivor Series locksets accept most OEM cylinders including Lori and Ilco. Standard IC Core locksets accept Medeco Key Mark, Falcon, KSP and Best Cylinders. IC Core locksets which will accept Corbin or Sargent IC Cores are also available.

Survivor Series ANSI Grade 1 and 2 locksets feature the "Clutch" proprietary lever support springs which eliminates handle droop and are available in all standard ANSI functions. All Marks USA locksets feature a lifetime mechanical warranty. They are UL listed for 3-hour fire rating and satisfy all ADA requirements.

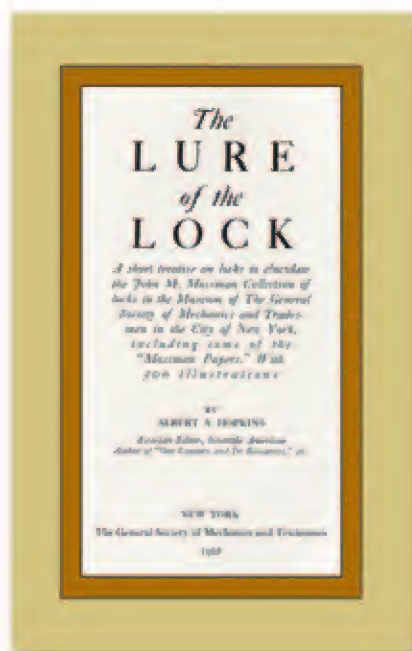
A New Dimension in ROFU Electric Strikes

ROFU International has made major improvements to the old stand-by of the

security industry, the electric strike. The "patent pending" 2400 series is field convertible from fail safe to fail secure or back in 10 seconds or less by moving two external screws. This strike works even when subjected to 35 pounds of back pressure. Uni-body construction, an investment cast keeper, stainless steel faceplate and shallow overall depth are some of the additional features. Optional items are a lip extension and LMCM (latch and cam monitoring).



TNL



The Lure of the Lock

This hardcover book, compiled in 1928, features dozens and dozens of beautiful photographs on ancient through modern locks.

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#LURE

COVER
STORY!

JUST REPLACE THE DOOR

**Why
put a
good
lock
on a
terrible
door?**



by Jake Jakubowski

While at the Door Hardware Institute (DHI) show, I was walking around looking for new and interesting products. As I passed the Taylor Door booth, a rep was demonstrating a prehung metal replacement door to a show attendee. I heard him say something to the effect that the old door could be removed and a new door hung in about forty-five minutes! He had my attention just that quickly.

I did a fast right turn and walked up to the booth to see the replacement door the Taylor rep was talking about. This is what I found out.

These replacement doors are prehung in a steel frame that is engineered to fit over the existing wood frame. The door is a steel-sheeted door in a steel frame that can be installed in as little as forty-five minutes. I was intrigued.

Taylor calls this door "The Professional Remodeler Series™" and they had a demonstration model set up that allowed me to see how the door's metal frame fit into the opening of the frame of the door being replaced. Not only was I intrigued with the concept, I decided that I wanted to find out if this was a salable item and if it would fit my well-known repertoire of "alternative" methods of making money.

As many of you know from having read my articles over the years, I have not hesitated to deviate from the straight-and-narrow of 'pure' locksmithing to earn a few extra shekels when the occasion presented itself. On numerous occasions I have written about installing commercial metal doors, wood doors, corrective hinges and other commercial door hardware - including frames - that is not generally part of a locksmiths normal daily activities.

Here's another shekel tree shaker that could easily put several hundred bucks of profit in your pocket for less than a day's work. Only this time, in the residential arena. Can you envision going out to rekey a couple of locks on a home and wind up with a ticket that could almost effortlessly become a six, or even seven-hundred dollar job. All because you said: "Hey, I can fix that!"

I do have to tell you up front that this is not an installation that will appeal to every locksmith; and it is definitely not a ticket that the average homeowner is going to buy. But, if you are inclined to take on projects that help round out your intake during slow weeks and you have a customer who has a need that you can fill... then Taylor's Professional Remodeler Series prehung metal sheeted door could be just what you are looking for.

As for installing this replacement door, unless you run into the unexpected (as in Mother Nature and Mr. Murphy), even an individual with minimal carpenter skills can install one of these doors within an hour or so.

As luck would have it, my friend Pete Gamble and I ran into problems with the installation of the very first door that I ordered from Taylor. The brick mold on the door was rotted at the bottom and needed replacement as well. However, Pete and I donned our crusader capes, became a dynamic duo of drastic door repair and solved the customer's problem. How Pete got in on the deal is, I was talking to him

about the Taylor door on the phone one day and he said he had just returned from a rekey job where a new door was definitely called for. Since I was looking for an opportunity to install this new product, I gave him the information on the door, suggested an installed price and he called back saying the customer wanted it done.

A few days later, I had the door in the back of my van, and Pete and I were sitting down to breakfast in one of our favorite restaurants, discussing the installation that we were going to start in just a little while.

In *photograph 1*, Pete is beginning to remove the screws from the existing hinges. The door we are replacing is a wood door about twenty years old that was pretty well destroyed by age and the elements. The damage was particularly evident along the bottom rail of the door where it was subjected to water damage from splashing rain and even run-off splattering against the door. Compounding the effects of the splash and splatter of rain and run-off, the door was shaded from direct sunlight, which would have aided in helping the door dry out. Moisture was a chronic condition in and around the bottom of this door and, no doubt, accelerated the decay.

Photograph 2, shows the water rot caused to the bottom butts of the jamb and brick mold around the door. This was where the unexpected came into play since Pete didn't realize that the jamb and brick mold were going to have to be replaced. We talked to the customer, pointed out the problem and told him that if he did not have us replace all of the damaged wood, the rotted areas would continue to allow water and pest intrusion. That would, of course, accelerate



**1. Pete Gamble
beginning the process
of removing the old
door from the frame.**



2. Results of chronic water damage to the latch side of the frame.



along the edges of the furring, the jamb and the brick mold. I'm not saying water can't intrude in between the new wood and the block walls to the house, but it's highly unlikely.

If you look at the bottom portion of the frame and furring in *photograph 4*, you can see where we began beading the caulk vertically to seal off the wood from moisture intrusion. We did not completely fill all the areas around the frame and furring as we felt it was necessary to leave the wood some 'breathing' room.

Photograph 5, shows the butt of the jamb set down in a puddle of caulking. *Photograph 6*, shows the frame attached to the furring on the latch side of the opening. The frame is secured to the furring by a number of screws, which are not visible in this photograph. Also note that the brick mold has not yet been installed.

With the frame in place and secured to the furring (and checked to make sure everything was plumb and straight) it is time to set the Taylor door in place. *Photograph 7*, shows Pete lifting the door into position in the frame. Look at the bottom of the door assembly and you can see the aluminum factory installed threshold, which is included with each of these doors.

Photograph 8, shows the door in position in the frame and ready to be secured. Note that we have not yet removed the protective plastic sheeting from the door. We waited until we

4. Shows caulking at bottom of furring and the new jamb.



the deterioration of the wood. Somewhere down the road the homeowner would have to have the jamb and brick mold replaced anyway.

The homeowner gave us the go-ahead to do whatever was necessary and we bought a frame, brick mold and some new pressure treated furring. *Photograph 3*, shows Pete caulking the bottom of the furring. We also caulked behind and up

3. Apply a heavy application of caulk around the bottom of furring strip.





5. New frame 'set' into a puddle of caulk.



6. New frame attached to furring strip without brick mold.

had the door in place and all the hammering and adjustments complete before we removed the covering to keep from scarring the door.

In *photograph 9*, Pete is seating the prehung door within the frame. If this installation had been in a finished room, rather than in an unfinished basement, we would have removed the door casing (molding), set the door in place, secured the lip of the door's metal frame to the wood frame and replaced the casing. That would have really cut down on the installation time. As it was, we had to re-build the opening before we could even get to the easy part.

In *photograph 10*, you can see several screws that help secure the metal frame to the wood frame and the furring as well. If you look closely under the screw in the header of the metal frame in this photograph, you can see a spacer block between the header and the door.

Several spacers like this and a couple of plastic tabs like the one seen in *photograph 11*, are screwed to the metal frame keep the prehung door square during the installation process.



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#DIS - 2000

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7. Pete raising the new metal door and frame into place.



8. The new door is in place. Note that the prehung unit includes a threshold.



#ALS - 1

Auto Lock Service

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9. Pete making final adjustments to the door before securing it to the frame.

Photograph 12, shows the Taylor door secured in place with the screws through the metal frame and into the jamb, etc. At this point, we took the squaring tabs, plastic sheeting and spacer blocks off the door and finished securing the metal frame.

Photograph 13, shows one of the mounting screws that is supplied with the door. The screw goes through the latch side face of the frame and into the new wood frame behind it. Also note the rubber weather stripping that is visible in this photograph. The weather stripping contains a magnetic material similar to that on a refrigerator door. That

11. Two plastic tabs like the one seen to the left of the door also help keep the door aligned during installation



10. Arrows point to screws that secure the door to the wood frame. Note the spacing block below the screw in the header. These blocks help keep the door and frame square during installation.

12. New door is secured to the wood frame and furring strips. We're ready to remove the protective plastic covering, spacing blocks and tabs.



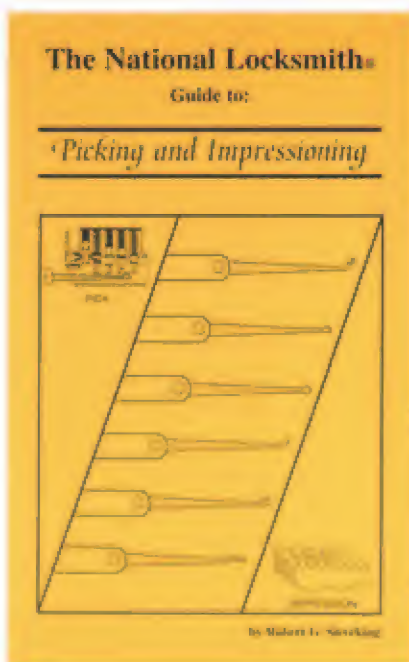


13. More screws through the face of the jamb hold the new door to the wood frame. Note the magnetically sealing weather stripping.

magnetically seals against the face of the door. The doorstep to the right of the weather stripping is aluminum.

Photograph 14, shows the double frame prep for a deadbolt and a knob or leverset. Between the two preps you can see another screw that secures the Taylor door's frame to the underlying wood frame. I have to comment here that

14. Strike plate preps in Taylor's prehung frame.



Picking & Impressioning

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#PI



15. Completed door with brick mold attached and caulked to new wood frame.

16. Hinge with holes for security screws that attach hinges to the wood frame.



when Taylor engineered this prehung door they tried to cover all their bases. This is to my knowledge, the only complete prehung metal replacement door for residential applications. Believe me when I say this is a quality product. But more about that later.

Photograph 15, shows the door replacement in an almost completed stage. Note that the brick mold has been secured to the wood frame and all that is left to do there is caulk the edge of the brick mold against the brick wall. We ran a bead of caulk down the frame edge before attaching the brick mold for added waterproofing.

You can readily see that the two screw holes in the hinge seen in *photograph 16*, do not have any screws in them. The holes are for the square Torx-style screws shown in *photograph 17*. Both of these screws are long enough to penetrate the wood frame behind the metal doorframe and add more security to the hinge side of the door.

Photograph 18, is of Major's HIT-11 attached to the door used for the hardware installation. Why a HIT-11 on a door that already has knobset preps on it? Well, during the process of installing the new door for the homeowner, Pete was talking to the homeowner and the subject turned to lock security, pickability and duplicate keys. By the time the door installation was complete, Pete sold the customer on the idea of replacing all (Including the upstairs doors) of his old hardware with new Grade 1 leversets with ASSA cylinders and Lori deadbolts with matching ASSA cylinders. So, we used the HIT-11, to accurately drill the cross-post holes for the leverset.

Upgrading the door hardware is another benefit of selling a door replacement to a customer. Selling a customer top-of-the-line hardware, in and of itself, is a moneymaking proposition. Selling them Grade 1 hardware in addition to a door replacement makes up for a lot of slow days.

Photograph 19, shows the completed installation, including the new Grade 1 hardware on the door. How long did it take? A little less than five hours, including the carpenter work that we had to do to replace the old frame and brick mold. How long would the job have taken if we had not had to do all the extras? Most likely it would have taken about an hour, to an hour-and-a-half. What about the forty-five minutes the Taylor rep had talked about at the DHI

17. Showing square Torx screws used to secure hinge to frame.





18. Using Major Manufacturing to drill dead on cross-post holes for new lever set.

show? Quite possible if the installer were experienced and provided Mother Nature and Murphy didn't throw him any curves. If all you have to do is remove the old door, the trim casing, install the new Taylor door and replace the trim

19. The completed door, including the new Grade 1 hardware.



casing, I think it could be done. Realistically, I'd bet on an hour or more. Particularly if you are installing new hardware or rekeying the old.

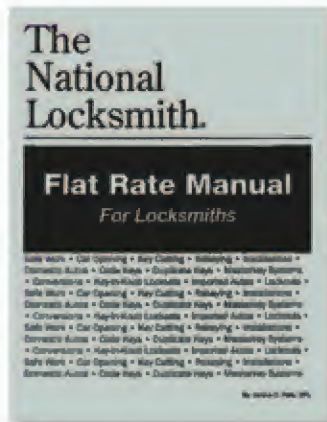
What's my impressions of Taylor's Professional Remodeler Series prehung metal door and door frame? It's excellent! From an engineering standpoint, I think they have their act together. Features like magnetized weather stripping, all steel construction, ease of installation and the fact that they even supply all the screws to complete the job, makes this door one of the better replacement door values that I have seen.

Cost wise replacement doors can be purchased at Lowe's, Home Depot or other home centers for a lot less than this door would cost. But this door is a Cadillac (in my opinion) compared to a lot of economical imports that are available. It is definitely not a door that you are going to sell to every door replacement prospect you come across. But, when you recommend and sell that customer Taylor's "Professional Remodeler Series" prehung metal door and frame - you can do it with confidence. Confidence in yourself, the product and the lifetime of use the customer will get from the door.

And, you can smile all the way to dinner with your wife, or significant other, as you count the shekels you made on just that one job!

For more information on this and other Taylor doors and a dealer near you, call: 517-345-5110. Tell 'em "Jake told me to call!" Circle #311 on the Rapid Reply Card. **TNL**

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#FRM - 1





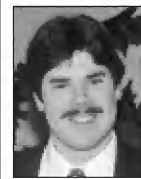
1. The 1999 Mitsubishi Galant underwent a thorough re-design and a early release. The Galant also is the first or one of the first Japanese nameplates to have locks supplied and manufactured by Strattec. Since Strattec has a great working relationship with the



locksmith industry, we hope they can get their foot in the door on more of these manufacturers, as this can only benefit the automotive locksmiths.

the 1999 MITSUBISHI Galant

> PART ONE <



By
Michael Hyde

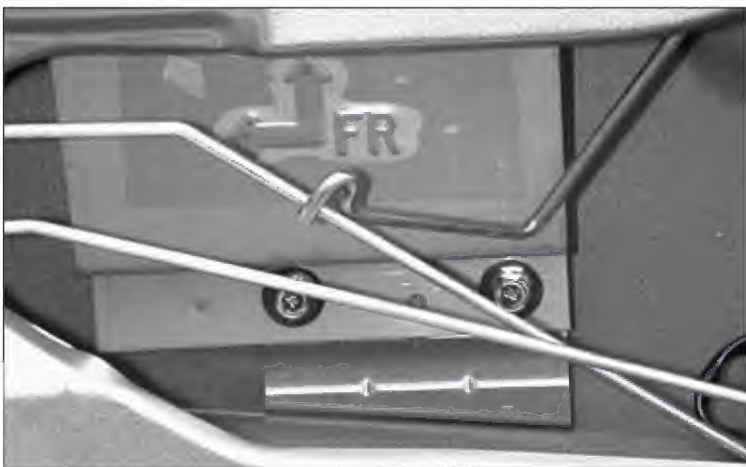
CAR OPENING



2. First start out with a good set of car opening wedges and the standard horizontal slide linkage tool. Insert the tool about 6 inches from the edge of the glass.



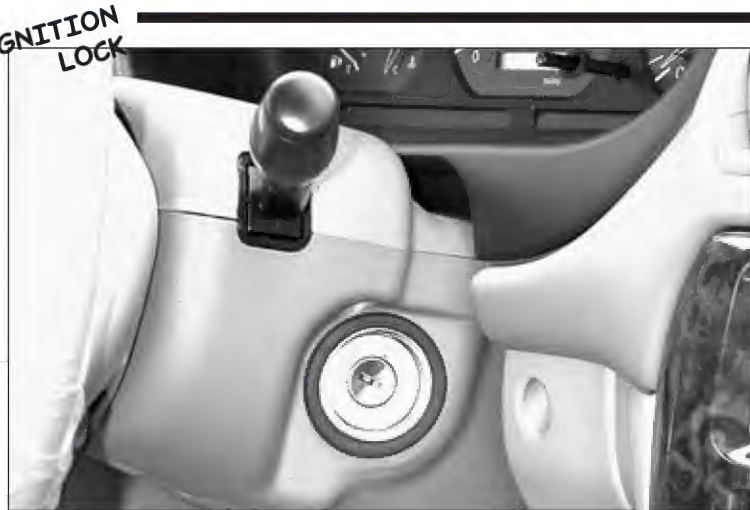
3. The linkage on this model is horizontal and well exposed.



4. A closer view show lock linkage is the upper rod and when you make contact it slides forward easily with a little downward pressure.



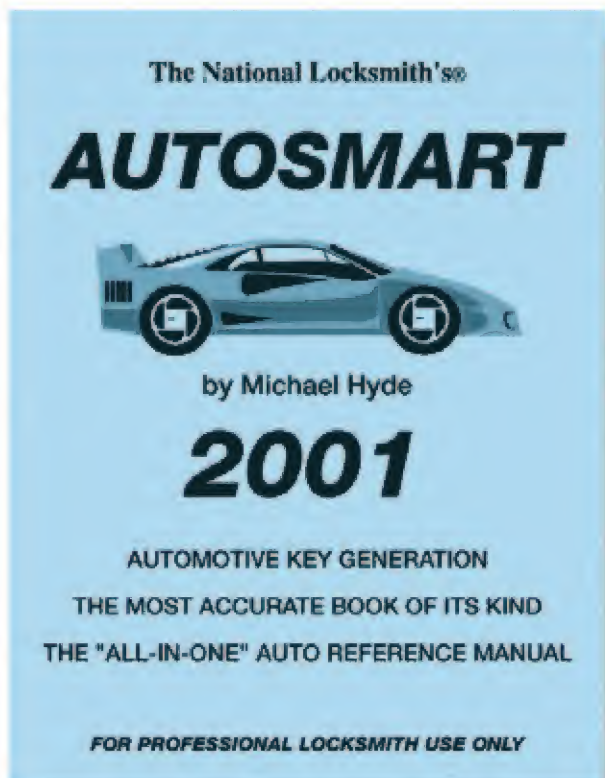
6. To service the lock you will need to remove the plastic two piece shroud. Remove the 2 screws directly under the column.



5. The ignition lock on this car is mounted on the column.



7. Remove the other and last remaining screw that is above the ignition lock.



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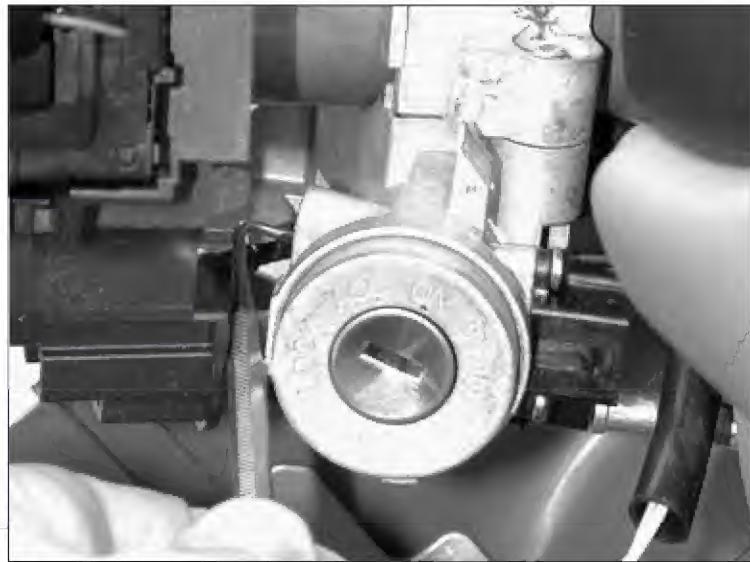
8. Once the screws are removed you will need to unsnap the top portion to the shroud.



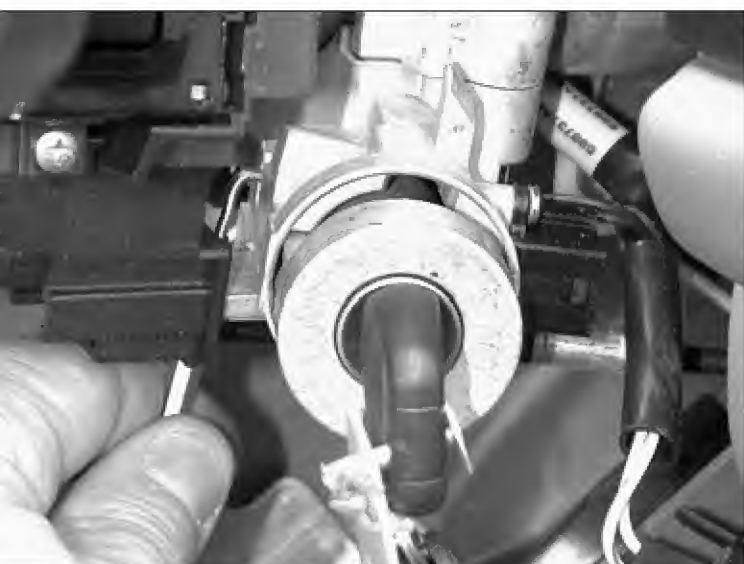
9. The lower shroud can now be lowered out of the way.



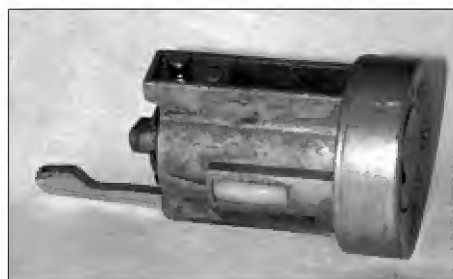
10. It may be easier to unsnap the illumination ring to remove the ignition lock cylinder. It snaps in at the top and bottom.



11. This model uses a active retainer. The retainer is located on the forward side of the lock at the 9 o'clock position.



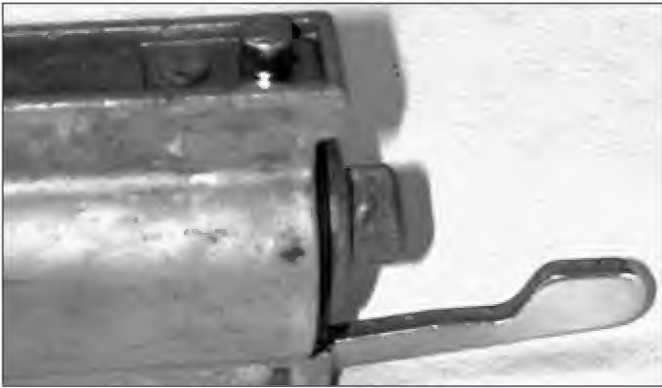
12. Insert a working key and turn it to the "ACC" position. Press down on the active retainer to remove the ignition lock cylinder.



13. The lock cylinder removed from the car. There is no way you could ever tell this lock was made by Strattec.

14. If the lock needed to be removed and no key would work or could be fitted to the lock, the lock could be drilled. Drill through the face of the lock in between the "O" and the "C" on the word "LOCK". Keep your drill straight and remember you are drilling into the retainer cavity.





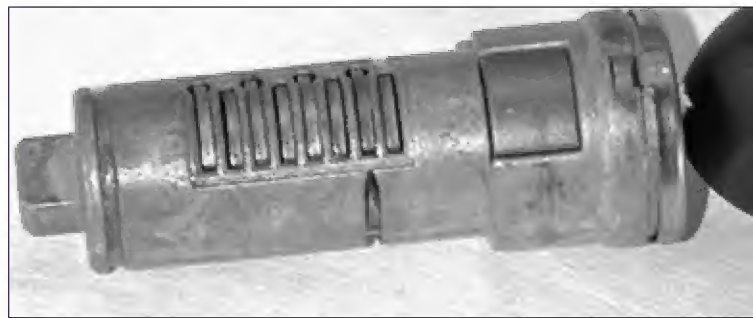
15. The retainer pin is not hardened. Once you have drilled out enough of the lower portion of the retainer material you can press down on the top portion of the retainer and remove. The lock would have to be replaced and drilling the lock is at your own risk.



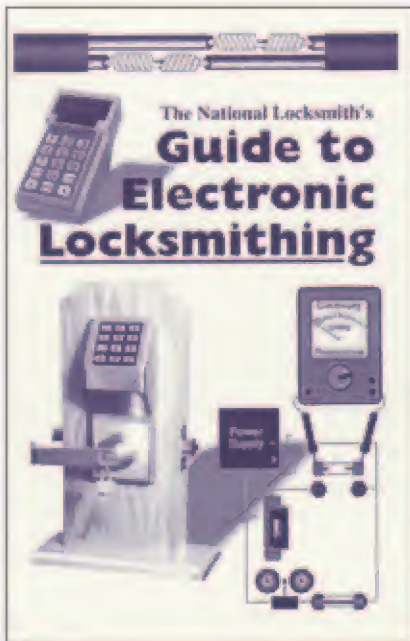
16. Disassembly of the lock to recode it is easy. Remove the tru-arc retainer on the rear of the lock and slide out the cylinder plug.



17. There are eight tumblers in the lock. Four from each side.



18. When working with the cylinder plug, be careful of the buzzer actuator falling out.



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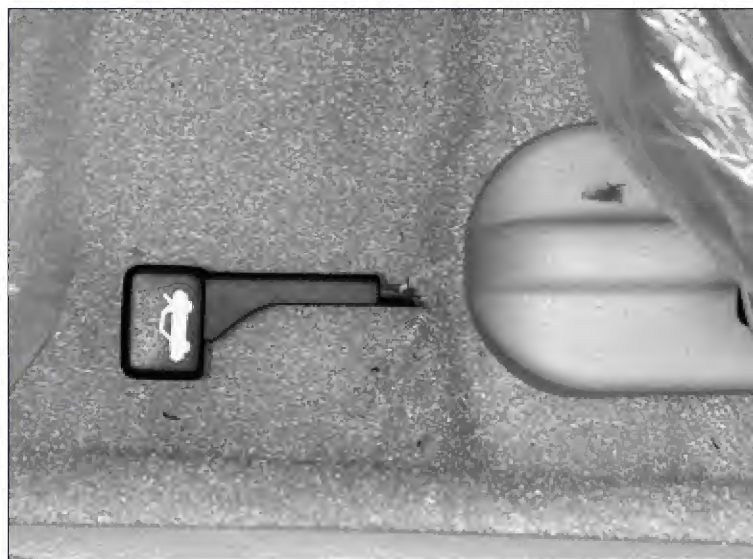
#EL - 1

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TRUNK
LOCK



19. The trunk lock cylinder is to the upper right of the license plate and is semi concealed behind a chrome nameplate.



20. There is a manual trunk release lever located next to the driver's front seat.



21. The trunk lock is held in place by two 10mm nuts, remove them.



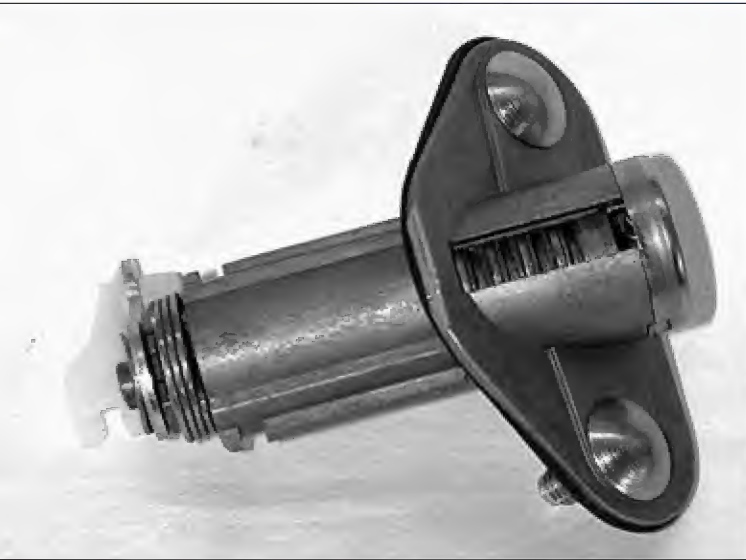
22. To get the trunk lock out you will need to remove the two screws on the chrome nameplate trim.



23. Next, unsnap the plastic snap fastener closest to the lock cylinder. You can now slide the chrome trim out of the way to remove the lock.



24. There is a large drain opening on the bottom of the trunk lock. You could insert a blank key and sight-read the tumbler depths through the opening.



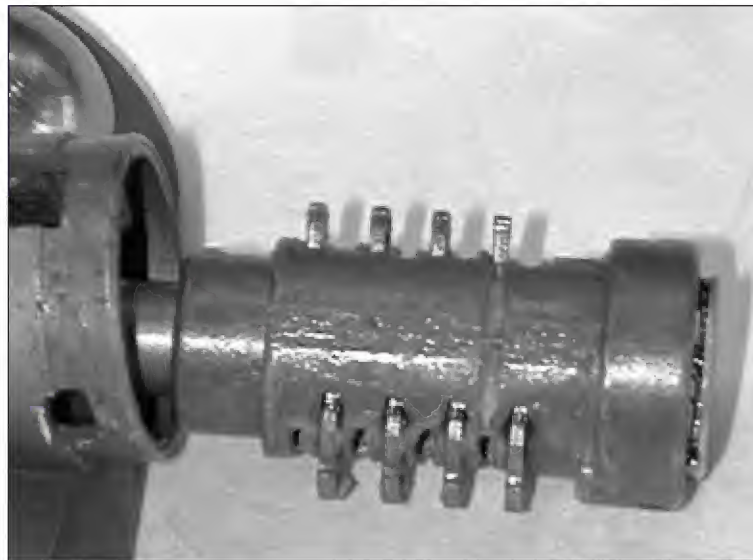
25. The trunk lock removed from the car.



26. Once again it is important to mark the tailpiece and the lock so you remember which way it goes back on.



27. The face cap is reusable so don't tear it up when you remove it.



28. The trunk lock cylinder plug is not warded and slides right out.



29. The trunk lock has all eight tumblers.

TNL



by Sal Dulcamaro

GETTING INTO COMBINATION PADLOCKS

PART FOUR

This month we continue our combination padlock series by exploring the bypass possibilities for both American and ABUS combination padlocks. As we explore a little deeper into the working mechanics of such padlocks, we will discover that there is often more than one way to defeat such a product without force.

American Model 300 Combination Padlock

If you look at the drawing in *illustration A*, you will see the approximate layout of the American Model 300. It is toe locking left side (from the back view), and has the fence located in the top right quadrant. If you wanted to drill a hole for viewing the gates under the fence, you would go about 3/16-inch right of center on the X-axis and about 1/8-inch above center on the Y-axis. If it were equipped with a keyed bypass, the lock cylinder would be located on the left side.

Photograph 1, shows an earlier version of the model 300. The current version of the American model 300 is slightly different. I mention this because I found one technique for shimming this version that doesn't work on the newer model 300 locks. This particular padlock doesn't have a bypass cylinder. With the open back, however, you can see the outline where the keyed cylinder would have likely been located if it had one.

There is an unusual amount of play for this shackle. When closing the shackle, it will catch after a certain

amount of inward pressure. After it catches, it is possible to push the shackle further inward. *Photograph 2*, shows what happens when the shackle is pushed further. The tapered surface of the notched end of the shackle pushes the catch slightly back toward the unlocked direction. If you push the shackle as far down as it will go, it will slightly compress the spring catch.

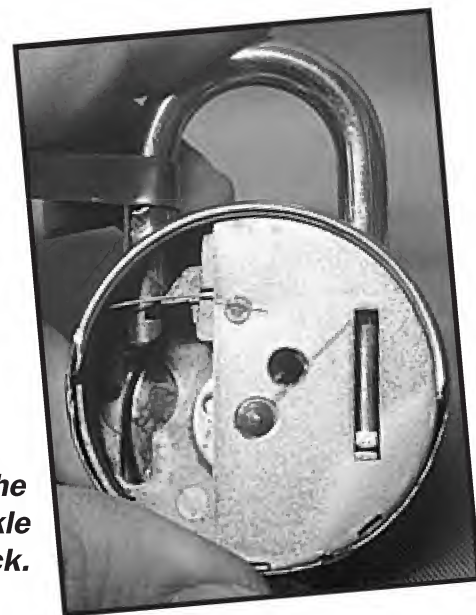
By moving the shim downward until it presses into the spring catch, you can hold the catch from coming back out, while pulling out on the shackle. It will then pop open as in *photograph 3*. It would make sense to insert the shim in the gap before pushing in the shackle. That additional force will probably make any tight gaps even tighter. The shim should be positioned over the spring catch before pushing down on the shackle.

Newer Version Model 300

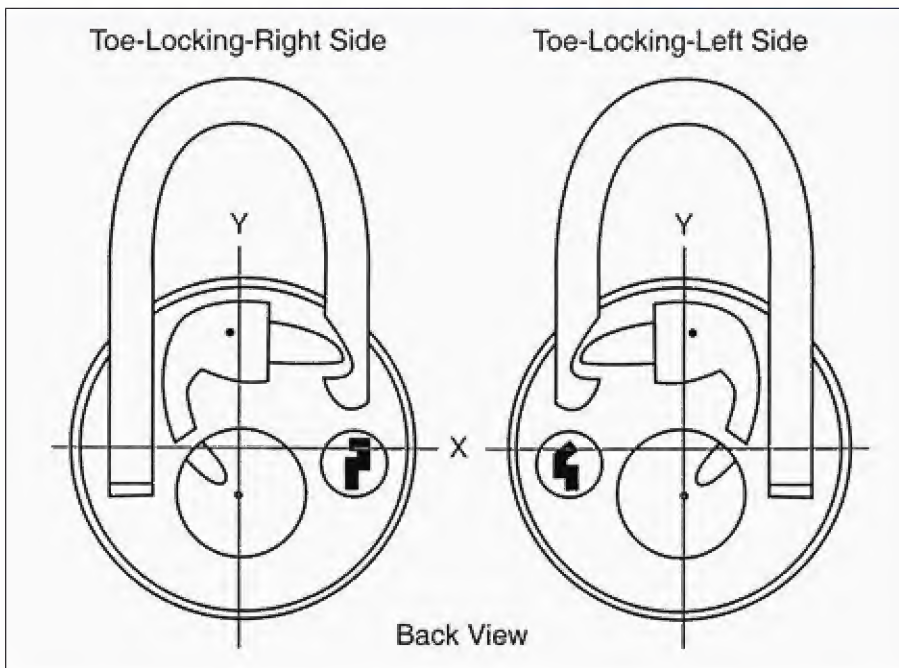
Photograph 4, shows some of the internal parts of a newer version American model 300 combination padlock. There were a number of physical changes. With a tool, I am pointing to a cast stop surface for the toe end of the shackle. When the shackle is closed there is almost no additional space for further downward movement. Although it can be shimmed, I can't use the technique I



1. An earlier version of the model 300.



2. The tapered surface of the notched end of the shackle pushes the catch slightly back.



A. The basic internal construction of dial type combination padlocks.

just demonstrated on the older version of the model 300.

In *photograph 5*, is a curved piece of spring steel that wraps around the three wheels that determine the combination. This blocks any possible view of the wheels through the shackle opening. Looking back at *photograph 3*, you may now realize that it was possible to view the gates of the wheels through the shackle opening. If the padlock was unlocked and you moved the spring catch out of the line of view. If you were clever enough, you could dial the combination to the shackle opening and then transpose the numbers so as to reposition the gates under the true location of the fence.

The technique of reading the combination through the shackle hole would have also been

possible with the Master 1500 series padlocks. If you try it with the keyed bypass version of the locks, though, you will only be able to clearly see two of the three wheels. The drive wheel (directly behind the dial) is obstructed from view by the mechanism that retracts the spring catch. This procedure used in conjunction with shimming is a way to open and decode a lock without drilling or damaging the combination padlock.

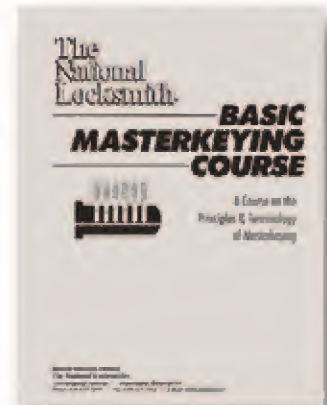
3. You can hold the catch from coming back out by holding the shim.



4. The internal parts of a newer version American model 300.



Basic Masterkeying Course



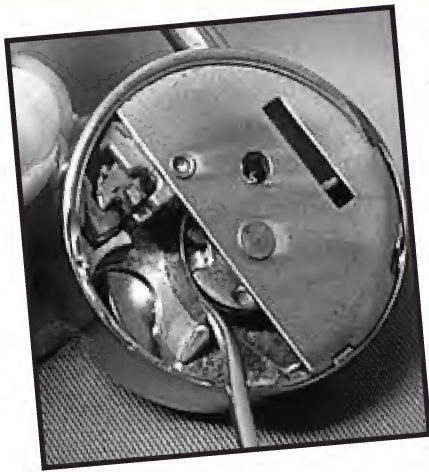
13 Lesson
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The Basic Masterkeying course is designed for the locksmith who wishes to become proficient in Basic Masterkeying.

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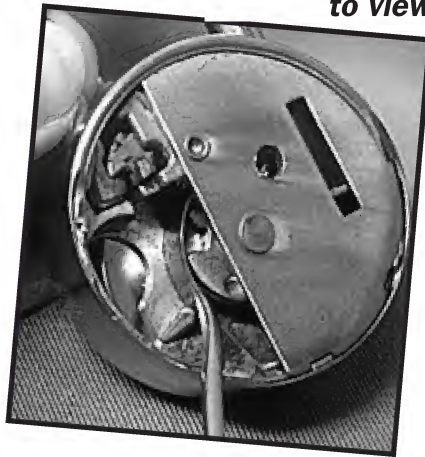


#MK - 1



5. A curved piece of spring steel that wraps around the three wheels determine the combination.

6. The spring catch exposed to view.



Shimming the Newer Version Model 300

Both versions of the model 300 are toe locking left side. *Photograph 6*, shows the spring catch exposed to view. I inserted the shim in the gap between the toe end of the shackle and the shackle opening. Rotating counterclockwise the leading edge of the shim engaged the spring catch and started to move it back. While continuing the rotation, I moved the shim further down until the catch was disengaged from the shackle, as in *photograph 7*. While holding the shim downward, I pulled up on the shackle until it opened.

I found that it opened much easier by rotating the shim counterclockwise. I didn't have other fully functioning (newer version) model 300 padlocks to practice on so I can't be certain that it is best opened in that direction.

ABUS Import Combination Padlock

I worked on an ABUS combination padlock that was die cast and made in China. Like the Master 1500, this lock is toe locking right side. I shimmed in virtually the same way. *Photograph 8*, shows the shim rotating counter-clockwise and about to make contact with the spring catch. After continuing the counterclockwise rotation, while moving the shim further downward, the shackle is ready to pull out in *photograph 9*.

I tried taking one of these locks apart but the die cast construction made it very difficult to do without breaking a number of internal components. Like the 1500, the fence is located in the top left quadrant. A rough estimate of the drilling location is 5/32-inch left of center and 7/32-inch above center. A

code number was on the back of the lock but I couldn't locate this code series.

Reshaping/Repairing Padlock Shims

Up until part 3 of this article series, it had been quite a few years since I had used a padlock shim. Even then I had only used them on keyed padlocks. This was the first time I tried them on combination padlocks. In my opinion, it beats a pair of bolt cutters because shims are just as fast (and much lighter to carry), and you can still use the lock afterward. The experimentation took a toll on my shims because I was trying endless variations to find the most effective techniques. They got bent and chewed up in the process. In years past, when my shims took such abuse, I would just toss them in the trash and get new ones.

The ceaseless hours of shimming and damaging the shims got me thinking and I found a handy way to salvage bent or damaged shims. I took the slightly crinkled pieces of curved thin metal and laid them over curved surface of a padlock shackle. I then took a smooth metal tool (or the shackle of a different padlock) and rubbed out the wrinkles and gashes as if ironing the wrinkles out of a shirt. I was surprised that I was able to repeatedly damage and repair the same shim over and over again. They are a lot more durable than I originally thought.



7. The catch was disengaged from the shackle.

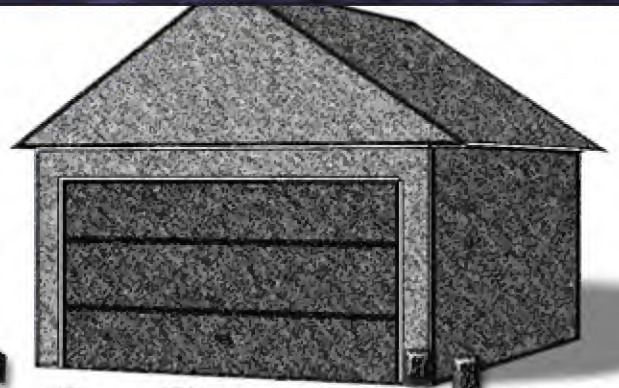


8. The shim rotating counter-clockwise and about to make contact with the spring catch.



9. While moving the shim further downward, the shackle is ready to pull out.

You may occasionally run into combination padlocks with gaps that are too tight to squeeze in a shim, and be forced to cut the shackle. But then again, you don't want your bolt cutters to feel totally useless either. **TNL**



A Higher Level of Garage Security



by
Bob Sieveking

The request was a fairly simple one. A commercial customer wanted to increase the security of some overhead garage doors. Since their installation, the standard “T” handle locks, like the one

shown in *photograph 1*, had not been much of a challenge for the neighborhood kids. There was also a need to bring the garage doors into the master system for other buildings in the complex. The hard part of this request was that the master system was Abloy.

I searched every catalogue I had, to find a solution for the request, but found none that was suitable. The following is my method of solving the problem and satisfying the customers need.

The inside latch release handle for the garage door is shown in *photograph 2*. This mechanism allows the door to be opened without unlocking the outside “T” handle. Lifting the handle draws the latch chains in unlatching both sides of the door. The clutching mechanism is necessary to allow unrestricted exit. The 1/4” shaft, through the center of this mechanism, is from the locking “T” handle shown in *photograph 1*.

My best solution was to use a Chicago Lock 4266NA Pop-Up “T” handle cam lock, with an Abloy insert to replace the Chicago tubular style cylinder. The problem then became finding a clutching mechanism to fit the Chicago lock tailpiece. The Chicago lock has a 1/2” -20 threaded



1 The standard “T” handle locks that were present.



2 The inside latch release handle.

The newly
tooled
locking
device.



4

The clutch assembled onto the
pop-up lock assembly.



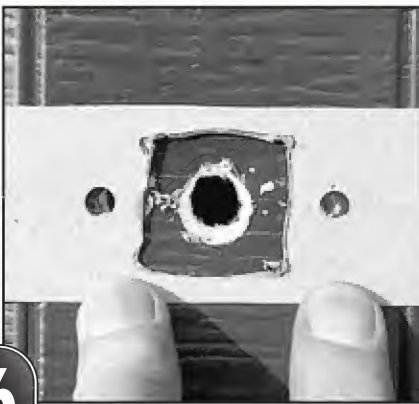
5

The Abloy cylinder installed in
the handle.



6

A cardboard template was made.



7

A test fit of the lock in the door.



square shaft for attachment of the locking cam. The shaft was much too large to pass through the existing hole in the clutch, and if the square hole in the clutch could be enlarged to accept the Chicago shaft, the clutch would be destroyed. What I needed was a clutching mechanism to fit the Chicago locking handle.

Photograph 3, show the result of about four hours in the shop. The clutch is made from two 1/2" fender washers. The front washer is slotted to allow 90° of free movement, and the rear washer is drilled and tapped to accept two 8-32 machine screws. Lock nuts were added to the rear of the screws, to prevent them from being loose.

The 1/2"-20 nut, which came with the Chicago lock was welded to the front plate. This allows the clutch to be threaded onto the actuator shaft of the lock assembly. The nut was drilled and tapped to accept an 8-32 cap screw. This will be used to secure the assembly to the squared 1/2"-20 actuator. The ears you see were salvaged from new clutch units at the shop. They are welded to the rear washer. This will allow us to attach the latch chains when the unit is installed on the door.

Lock Repair Manual



Here, under one cover
you have a tremendous
amount of lock servicing
information. Next time
you run into a problem
chances are you'll find
the answer in the Lock
Repair Manual.

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#LRM - 1



8

Self adhesive foam gasket material applied to the rear of the lock.



9

The lock chassis bolted in position.



10

The new clutch assembly installed on the Chicago lock.



11

Assure free movement of the clutching actuator.



12

The completed locking device installed.

Diary Of A Safeman



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#DIARY

Photograph 4, shows the clutch assembled onto the pop-up lock assembly. Note that there is no need for attachment to the door, which makes this design applicable to any door thickness. The clutch can also be affixed to the lock for horizontal or vertical handle orientation.

Photograph 5, shows the Abloy cylinder installed in the handle. All keying was done at the shop before we went to the door.

To insure a good fit, a cardboard template was made over the new Chicago lock. With the template, shown in photograph 6, we were able to locate our new lock over the old footprint, to conceal the old holes. The template was used on the inside the door as well, to pencil the outline of the new hole. For this installation, we used a Makita die grinder and 1/4" carbide straight burr to open the holes to accommodate the new lock.

Photograph 7, shows a test fit in the door. With the holes checked for proper fit, self adhesive foam gasket material was applied to the rear of the lock chassis as you see in photograph 8. Photograph 9, shows the lock chassis bolted in position with two #10

carriage bolts. Large washers cover the holes made by the previous lock handle fasteners.

Photograph 10, shows the new clutch assembly installed on the Chicago lock actuator. The cap screw is tightened in place over a flat on the square shaft. With the latch chains in place, all that remains is to test the lock. Photograph 11, illustrates the free movement of the clutching actuator. Photograph 12, shows the appearance of the lock on the outside of the door.

Since these locks were installed, there have been no more break-ins at this location.

I offer this little write-up not as a show of what I have done, but as an example of what you can do. It is part of being the smith in locksmith. Too many shops turn away work because they can't find an easy solution in the pages of some catalogue. Too few shops apply their skills to creating new and innovative solutions for their customers needs. Locksmiths have always been the inventors, tinkerers, and innovators. I think it's part of the job description.

Good Luck. **TNL**

Lockmasters

An Expanding Vision

by Don Dennis

As I drove through the countryside to visit Lockmasters Inc., in Nicholasville, Kentucky, I thought about all of the emotions that are evoked in people when you mention the names of Sargent & Greenleaf, Lockmasters and the Miller family who all call Nicholasville, Kentucky home. Personally, I have a great deal of sentiment or maybe even passion for what these names have done for our industry. After a long day's drive, I pulled up in front of Lockmasters' Education Center. As I parked, I decided that any pre-

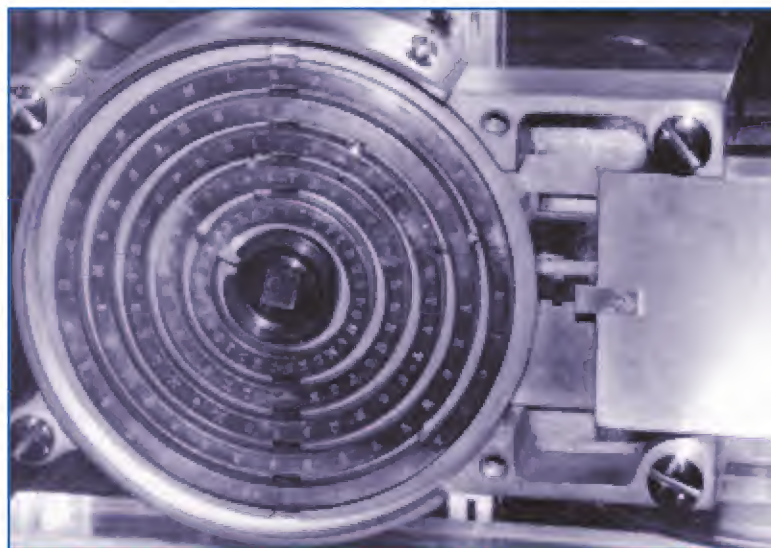
conceived notions would be set aside. I wanted to enjoy this time and make it a fresh and rewarding experience. I walked in the front door forgetting that the Harry C. Miller Lock Collection was moved from Sargent & Greenleaf, which once housed it, to this location. (See *photograph 1.*) I found my eyes growing large with amazement. It was like when I was a kid, only instead of looking at cookies and candy in a showcase window, I was looking at hundreds of locks and dials like this Dodds lock. (See *photograph 2.*) Not only is the lock

unusual, the dial is as well. (See *photograph 3.*)

Here it was, the Harry C. Miller collection bigger than life, and I was hopelessly lost. First though, I had some business to attend to since my interest was in the education programs that Lockmasters offers. So internally, I simply drooled as I walked by the showcases. That day, I probably passed those cases fifteen times, and each time found myself distracted. Each time, I had to force myself to regain composure. I was having a great time!



1. A portion of the Harry C. Miller collection.



2. The Dodds combination lock is a five-wheel/ring straight-tailpiece lock.

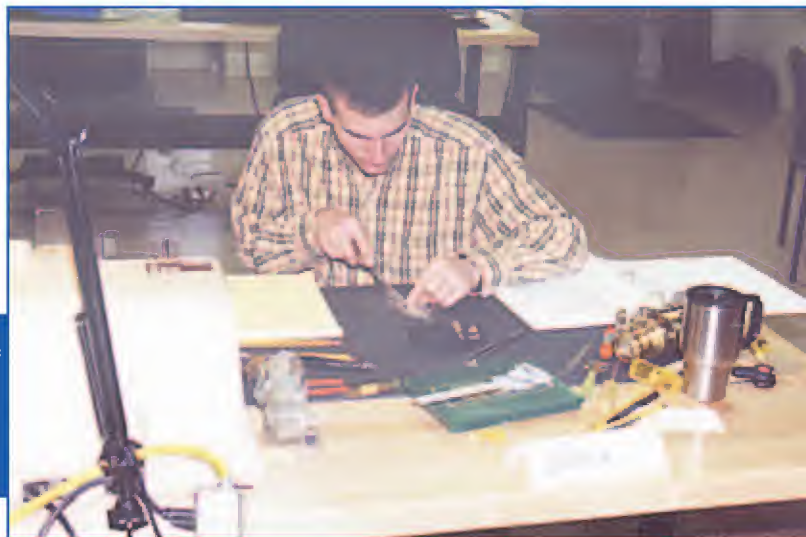
3. This unusual Dodds dial is numbered as well as lettered.



4. This class was a hands-on class dealing with basic locksmithing.



5. Extensive selection of hands-on technical courses are available.



6. The education center is a state-of-the-art facility.



I did find out that some very interesting things are taking place at Lockmasters. The company is expanding their education program as well as taking strides to become a full-service distributor of tools. This means expanding their lines of locksmithing tools in addition to supplying the needs of safe technicians. They're not only carrying drill bits, safe drills and scopes. They're also carrying key machines, picks, auto opening tools, and more. The staff was working on a new tool catalog during my visit and it should be ready for distribution by the time this article is printed. They indicated that it would be one-third larger than the current catalog. I'll be looking for mine in the mail!

When it comes to education, Lockmasters seems to have it all together. I know several locksmiths who have taken Lockmasters' courses and I have yet to find anyone dissatisfied with their experience or with what they learned. (See photograph 4.)

Lockmasters was originally established in 1955 as a school for safe and vault technicians to learn the art of lock manipulation. Lockmasters' curriculum has since grown to encompass an as well as security management training. (See photograph 5.)

Some courses are presented "on-the-road" in cities across the United States, others are held at Lockmasters'

education center, which officially opened in 1997. The education center is a state-of-the-art facility equipped specifically for the security professional. (See photograph 6.)

As technology changes and is integrated into the security industry, Lockmasters continues to update

course material and add new classes. An example of this is the Time Lock course. In the past, it took three days to complete. Now, it takes five days to cover the material, which reflects the changes that have taken place in the security industry. It has become necessary to include electronic information as well as mechanical.

Other changes in the education program deal with helping the student get the most out of their classroom experience. Some students expressed a concern about courses of study and scheduling conflicts. They felt at a disadvantage because they could not allocate another week during the year to complete their training. The course on Safe Deposit Locks is a good example to use. The student technicians also needed a thorough understanding of vault locks. So, a new course has been developed for 2000 called the Bank Technician Course: Vault Locks & Safe Deposit Locks. You can choose to take five days of training or ten days. The ten-day class will include Time Locks. Another example from last year would be Lockmasters' individual classes for mechanical safe locks and electronic safe locks. These two classes have been combined into one called Safe Lock Servicing: Mechanical & Electronic. This new class will be more comprehensive, but can be completed in five days. Who said the survey we fill out at the end of each course is ignored? I think this is a great improvement!

The real reason I wanted to make this trip was to gain a better understanding of a new breed of classes being added to Lockmasters' curriculum. I felt these new classes might not be in the locksmith's best interest. I thought that possibly they would be supportive of special interests. However, I was pleasantly surprised! In fact, I even made the recommendation that a list of current manufacturers be supplied with some of the course materials. I'm getting ahead of myself here, so let me begin with the concept.

You can ask any security professional, "What would be the concept of security and its application as viewed by the eyes of a business executive?" The answer has been, until recently, that there's been little understanding within the business community as to what security is and how it relates to their particular business. With the new information highway, that may be changing. However, I'll bet there are a lot of locksmiths out there scratching their heads wondering what product to use under what circumstances, especially since there are a multitude of electronic devices now in the marketplace. This is not an embarrassment! The area of Access Control alone will leave you stunned when we consider the level of

technology that has entered the marketplace within the past three years! We can't even keep up with the variety of products hitting the market, much less know what to recommend.

This is the area that Lockmasters is tackling. The education division has a new identity to match its new direction. It's now called Lockmasters Security Management. (See photograph 7.) As stated earlier, this division will supply security management training as well as the existing hands-on technical training. The hands-on segment of the program is familiar to most of us. It is composed of classes that deal with safes, safe locks, GSA containers, professional locksmithing, safe deposit locks, vault locks, time locks, electricity, electronics, lock manipulation, and certification classes like Simplex/Unican. (See photograph 8.) The last of their hands-on courses deals with methods of theft and prevention through evaluation and implementation of proper hardware and/or procedures. This evaluation concept is the foundation for the new security management classes.

First, know that these new classes are not just for the business executive or the security director. These classes apply just as easily to the locksmith, safe and vault technician, or the alarm installer. The industry is immense and taking a class of this nature will only increase your awareness and support for the rest of the industry. We may not be able to learn everything about every subject, but we can become well rounded and in-turn provide better service to our customers.

Let me give you a list of the new classes before we touch briefly on each, and we will end with a look at the Access Control Evaluation class. The security management program includes Basic Crime Prevention, Security Surveys & Hardware Evaluation,

Theft Control/Loss Prevention, Controlling Workplace Violence, Physical Security & Hardware Evaluation, Risk & Crisis Management, and the before mentioned Access Control Evaluation. It is easy to see how these subjects connect to one another.

Basic Crime Prevention is just that. It is a basic understanding of what we perceive prevention to be and how it can be applied.

Theft Control addresses the internal and external threats to a business and how to deal with the threats. All of these classes teach methods and not necessarily product.

Physical Security involves the design and application of perimeter protection, intrusion detection, access control, CCTV, lighting, etc. It is still your job as a locksmith, safe technician, or alarm installer to sell the appropriate product.



8. There was a great deal of personal teaching between student and head instructor Allan Halverson.



The only problem, as I see it, is if these customers are more knowledgeable than you are! You may not need to know about intelligence gathering and risk analysis, but if the customers' questions deal with the basic practices and concepts of physical security, what are you going to say? As you are hopefully beginning to realize, these courses are for a wide variety of people. They've been created for security managers, government agency representatives, property managers, loss prevention personnel, law enforcement, human resources personnel, and on and on.

I chose the Access Control Evaluation course for dissection since it is one that could be taken by anyone in the security industry or in the business community. Also, the terminology is familiar. As with all the courses, this course begins with an overview. The student will learn about helpful surveys to ascertain the customer's needs, different types of equipment and their proper application. In addition, Access Control Evaluation covers space considerations and how systems can best be utilized. Other important topics include laws, safety codes and standards required in the construction industry.

In one section of the course, the student will look at methods of evaluating access control input technology. It is fascinating! The class looks at mechanical input devices such as key switches, mechanical keypads, and coded card technologies. The card technologies captured my attention. Just a quick listing would include Hollerith, Bar-Code, Magnetic, Electronic, Biometric and Smart Cards. While we have heard or seen many of these cards in use, the Biometric and Smart Cards may need some definition.

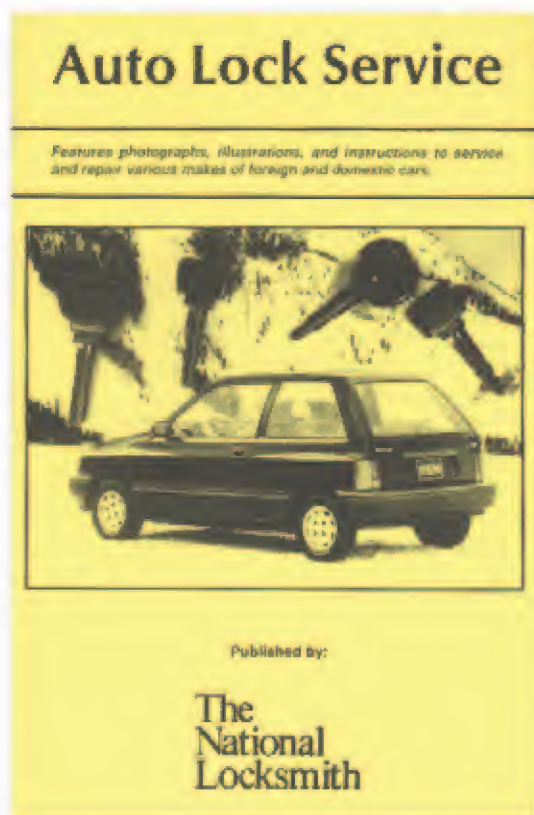
Biometric is the James Bond stuff. It involves behavioral verification techniques like voice, fingerprint, signature, and even facial. This also enters areas that involve passive infrared, microwave, and ultrasonic detectors. Smart Cards, in the near future, will control our lives! These cards will contain information concerning our medical history, what doors we can open in a business or a home, and even the amount of cash we have available in our bank account. They will act as a debit card when we make a purchase. If that's not bad enough, they'll become a credit card when we're out of cash! Smart Cards will probably even contain programming that will start our cars.

Students taking the Access Control Evaluation class will be able to determine each card's level of security. The evaluation would include the card's resistance to duplication, weather resistance, field settable coding, reader maintenance, and the cost associated with the different Biometric concepts. With this type of information becoming more widely accessible, the security professional will probably be dealing with a knowledgeable customer. For the security professional that has fallen behind or below, the Access Control Evaluation course would be a fast and easy way to get back on top.

My impression is that this effort towards a top-level, comprehensive education program will provide, over time, a great improvement in customer relations. It will also improve the knowledge and skills of the security professional that takes advantage of it.

The everyday threats to businesses and to the people who own and manage them, have become more complex. The pace of change is bewildering to the business professional, and it challenges every standard and norm of our society. This rapid change also makes it difficult for the security technician to stay

Continued on page 60



#ALS - 1

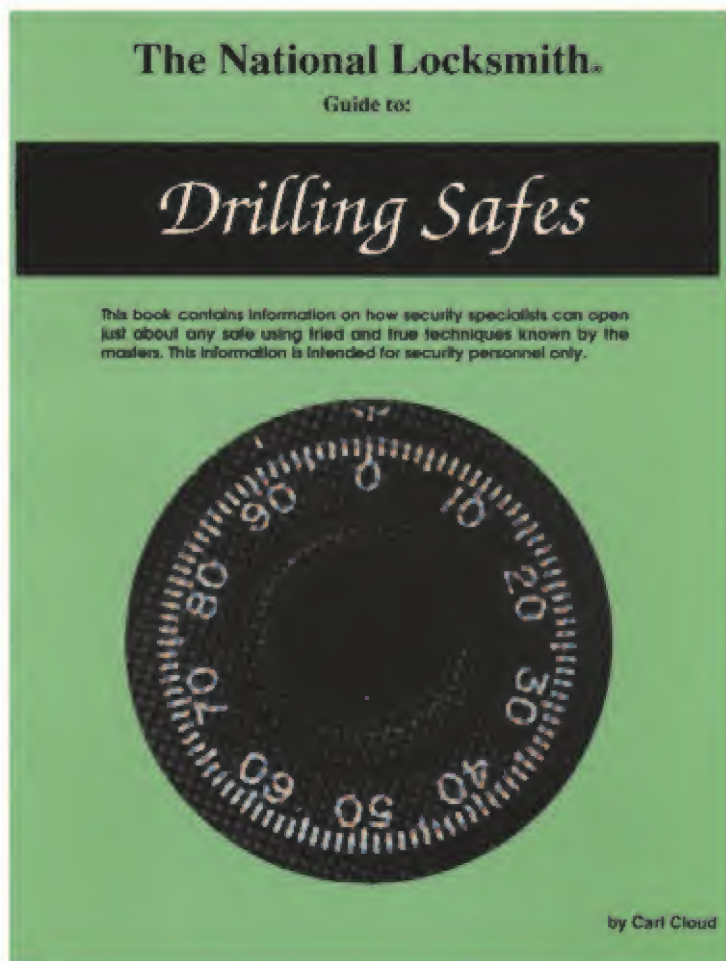
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#DS - 1

current. In the security industry, when no one else is offering a torch, it's good to see that Lockmasters is lighting the way. They are stepping forward and offering solutions to some of the problems plaguing businesses today. With this kind of foresight and vision, it's no wonder they're celebrating 45 years of service to the security industry.

For more information on Lockmasters courses call: 800-654-0637; Fax: (606) 885-7093; E-mail: salesinfo@lockmasters.com; Web: www.lockmaster.com, or circle 285 on Rapid Reply.

For information and courses available from other educational sources contact the following schools:

Acme School of Locksmithing

11350 S. Harlem
Worth, IL 60482

Phone: (708) 361-3750

Fax: (708) 448-9306

Contact: William Beranek



California Institute of Locksmithing

14721 Oxnard Street
Van Nuys, CA 91411

Phone: (818) 994-7425

Fax: (818) 994-7427

Contact: Corey Friedman



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Grandview, MO 64030

Phone: (816) 765-5551

Fax: (816) 765-1777

Web: www.marketlynx.com/cstm

Contact: Steve Barnhart



Foley-Belsaw Company

6301 Equitable Road
Kansas City, MO 64120

Phone: (816) 483-2700

Fax: (816) 483-5010

Contact: John Baenish



Golden Gate School of Lock Technology

3722 San Pablo Avenue
Oakland, CA 94608

Phone: (510) 654-2677

Fax: (510) 654-9429

Contact: Nevada Cross



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101 Edgewood Plaza Drive
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Fax: (606) 887-9491

Web: www.mbausa.com

E-mail: mbatools@aol.com

Contact: Mark Bates



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39 North Bennet Street
Boston, MA 02113

Phone: (617) 227-0155

Fax: (617) 227-9292

Contact: Kevin McGinnis



TRIL

Commercial Van Interiors

The service vehicle is one of the locksmith's most valuable tools and fortunately there are many packages and accessories available to make the job easier. Setting up your vehicle to work for you takes some consideration, but today's modular equipment designs provide for a customizing of sorts, enabling you to put together a package that suits your needs. (See photograph 1.)

Equipment manufacturers, such as Adrian Steel Company, manufacture modular equipment that can be arranged in a variety of ways, to provide an organized and ergonomic work environment. The equipment manufacturers provide suggested

interiors for various industries, including the locksmith industry. Whether you work from a full size van, mini-van, cube van or pick up truck, there is a package right for you.

What distinguishes the locksmith package from other interiors?

Workbenches are a good start. They can be as small as two feet in length or can span the length of the cargo area. (See photograph 2.) This allows ample workspace to cut keys, disassemble and assemble locksets. Literature trays and data files provide storage for literature and various manuals. Drawers offer the locksmith storage for key blanks, tools and small

parts. A stool allows the locksmith a comfortable work setting.

Whether you need on board power, interior or exterior lighting or just a hook or tray to keep something handy, it's all available. Lighting is an important part of the upgrades available because it provides good visibility and a safe work environment. (See photograph 3.)

Modular equipment allows for an arrangement that's best for you. Modular drawer units, cabinets, shelving and bins allow an unlimited variety of arrangements to satisfy almost any requirement or preference. (See photograph 4.)



1. Interiors can be customized to suite your specific needs.

2. A custom workbench arrangement.



3. Work lights can provide ample lighting inside or outside the vehicle.



4. Drawer and cabinet modules.



Guide to Motorcycles

For years locksmith have begged for a comprehensive service manual on motorcycles and its finally here!

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#MOT - 2

April 2000 • 63

Paperwork and reference material organizers provide ready access to nearly every kind of reference material you carry. The popular data files feature a clipboard, Plexiglas cover and a quick release mounting system for easy access to the engine housing. (See photograph 5.)

Auxiliary power supplies such as inverters and generators can provide the power needed to run key



5. Paperwork and reference material organizers.



6. Accessories offer a safe productive working environment.

machines, electric tools and lights can also be added. (See photograph 6.)

Pre-packaged interior arrangements are available for your convenience. If one of these arrangements does not satisfy your individual requirements, an interior can be custom tailored specifically for you. For full size vans two pre-packaged arrangements are available. The #96101 Full Size Van package features a partition with a walk through door, full length workbench top on driver side or vehicle, 18" and 36" RediBase™ platforms and curb side shelf/cabinet/drawer modules. (See illustration A.) The #96102 Full Size Van package features a full partition, driver data file, RediBench™ with 36" RediBase™ sloped key machine platform and extensive drawer and cabinet modules. (See illustration B.)

For mini vans two pre-packaged arrangements are also available. The #96103 Mini Van package features a partition with walk through door, full length workbench top on driver side of vehicle and a 36" RediBase™ platform and curb side drawer/cabinet module. (See illustration C.)

The #96104 Mini Van package features a partition with walk through door and full "U" shaped wrap-around workbench top over a variety of drawers, cabinets and open shelving. (See illustration D.)

For walk-in and cube vans one pre-packaged arrangement is available. The #96105 Walk-In and Cube Van package features full-length, standing height workbench tops with two 36" RediBase™ platforms and extensive use of modular drawers, cabinets and shelving. (See illustration E.)

Who is involved with bringing these packages to the locksmith?

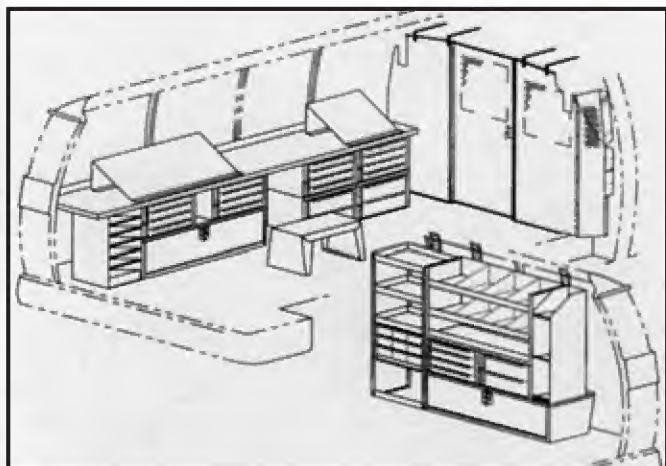
The automotive manufacturers are offering programs to provide work van interiors for various industries, which also include the locksmith industry. The basic programs offer a free service van interior. These basic packages provide a good work environment and at no additional cost, so the price is right.

General Motors offers a locksmith arrangement that is an upgrade of the free van interior package, through its Chevrolet Commercial Customer Choice Program and GMC Fit For Profit. This package is an Adrian Steel General Locksmith Interior and retails for \$2344.00. Through the program it is available for an upfit charge of \$430.00. Not a bad deal. The package is designed for the locksmith complete with workbench, large storage cabinets, sloped key machine base and stool. The additional upfit charge can be added to the lease price or incorporated in the purchase price.

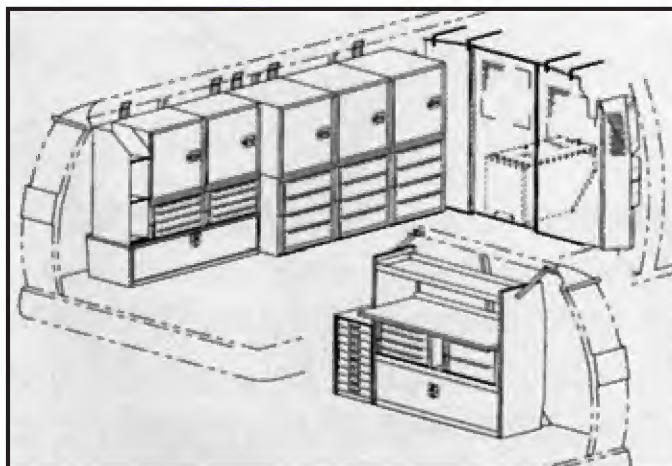
Ford, along with Masterack van equipment and Dodge, who incorporate the Crown line of van equipment, also offer programs with free service interiors. These packages can provide a good starting point for your vehicle work needs. Additional equipment can be added later.

Where can I find out more about equipment available for the locksmiths vehicle?

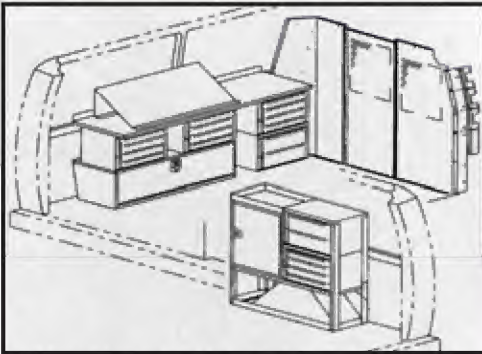
You can see these packages by visiting your local truck equipment house, tool supply house or light duty vehicle specialist like Commercial Van



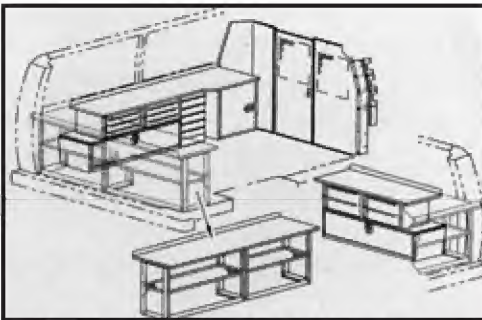
A. Full size van package #96101 features a partition with a walk through door, full length workbench top on driver side or vehicle, 18" and 36" RediBase™ platforms and curb side shelf/cabinet/drawer modules.



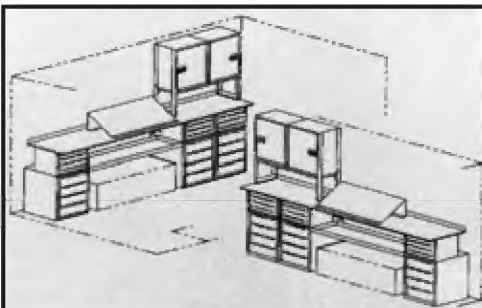
B. Full size van package #96102 features a full partition, driver data file, RediBench™ with 36" RediBase™ sloped key machine platform and extensive drawer and cabinet modules.



C. Mini Van package #96103 features a partition with walk through door, full length workbench top on driver side of vehicle and a 36" RediBase(platform and curb side drawer/cabinet module.



D. Mini Van package #96104 features a partition with walk through door and full "U" shaped wrap-around workbench top over a variety of drawers, cabinets and open shelving.



E. Walk-In and Cube Van package #96105 features full -length, standing height workbench tops with two 36" RediBase(platforms and extensive use of modular drawers, cabinets and shelving.

Interiors. This equipment is also displayed at local, regional and national trade shows such as ALOA. Commercial Van Interiors has specialized in catering to locksmith needs and offers an in depth line of packages. This is enhanced by industry specific literature that is specifically written for the locksmith.

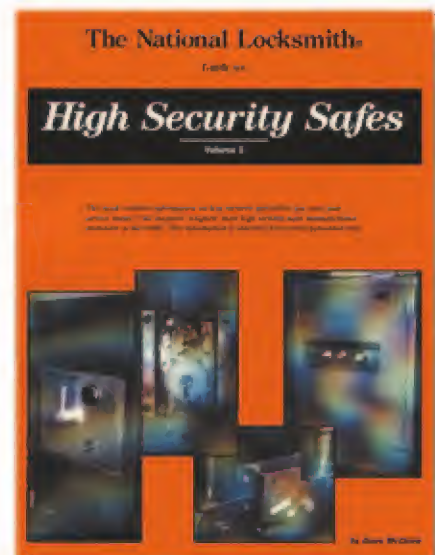
For more information on Commercial Van Interiors call: (800) 759-7477; Fax: (314) 427-1525; Web: www.commercialvan.com or circle 286 on Rapid Reply. 

High Security Safes Volumes 1 & 2



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#HSS, HSS - 1

BEGINNER'S CORNER

The Jackson 1085p Exit Paddle



by
**Jim
Langston**



1. The door had a mortise deadbolt on it.

Jackson makes a couple of different panic bars. The Jackson 10 series exit device is universally recognized as the standard for aluminum storefront hardware. This crossbar device was designed with simplicity in mind, yet it will provide many years of smooth, reliable operation. Available in both a rim and concealed vertical rod version, this device is suitable for use with narrow, medium, and wide style doors. The 10 series exit device is the perfect solution when considering a dependable, maintenance free means to satisfy life safety requirements.

Recently I had the opportunity to install a push paddle on a door at a private school. The school wanted a door that could be exited by a push paddle from the inside of an office into the auditorium. This door was not an outside exit; it connected the auditorium with the office. They wanted this door to remain open during the day and closed at night. The door had a mortise deadbolt on it, as seen in *photograph 1*. This photograph also shows the inside of the door.



2. The outside of the door, which opened into an auditorium.



3. I drilled a hole on the inside for the rim cylinder.

4. I installed a pull handle.



5. The rim cylinder is offset to the right.



6. The inside of the door showing the mounting bracket.



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Controlled Service dispatching software
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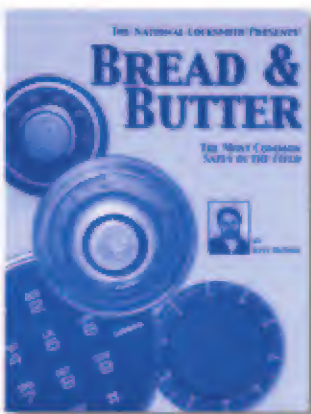
#DIS - 2000





7. When the mounting bracket is installed you can then install the push paddle.

Bread & Butter



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#BB - 01

Photograph 2, shows the outside of the door, which opened into an auditorium. After removing the mortise deadbolt and push plates, I then drilled a hole on the inside for the rim cylinder as seen in *photograph 3*.

I then installed a pull handle (*see photograph 4*) and drilled the outside of this pull handle for a rim cylinder. In *photograph 5*, you will note that the rim cylinder is offset to the right closer to the edge of the door, this is so the push paddle will line up closer to the edge of the door on the inside.

Photograph 6, shows the inside of the door and also the mounting bracket. The mounting bracket fits on top of the rim cylinder screws.

When the mounting bracket is installed you can then install the push paddle, as seen in *photograph 7*. Make sure your rim cylinder tailpiece has been inserted into the push paddle. Screw the push paddle down with two Allen screws on the top, and one Allen screw on the bottom of the push paddle. After all of this is done, you can then install the strike. After you have completed the installation of the push paddle it should close and latch. If it does not close and latch you can adjust the strike accordingly. Since this is an adjustable

strike you should have no problem. You are now ready to test the push paddle.

If the push paddle is in the locked position you can insert the key and turn counter-clockwise one half turn and the door should open. If you want the door to stay open turn the key counter-clockwise 360 degrees and remove the key, this will hold the locking bolt back into the paddle and the door should remain unlocked.

To lock the push paddle turn the key clockwise 360 degrees and the paddle will be in the locked position. In the locked position, when the door shuts it will automatically lock and be locked from the outside. Anyone on the inside of the door can push the paddle and open the door and it will then automatically lock behind him or her.

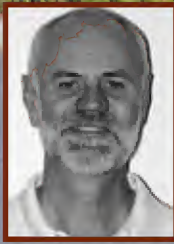
Jackson also makes standard panic bars with vertical rod applications. The vertical rod applications on aluminum doors are concealed. In a future series on Jackson panic bars I will discuss how to install a concealed panic bar.

For more information on Jackson hardware call: 800-533-6229; Fax: (213) 261-9555 or circle 287 on Rapid Reply.

Point To Ponder:

Try to explain counter-clockwise to a child with a digital watch. **RL**

1990 HONDA GOLD WING



by
John Blankenship



1

The Honda Gold Wing SE is Honda's premier luxury touring motorcycle. Originating a key for one is best accomplished by picking the gas lid lock. The code is stamped on the back of the gas lid lock. Reading or impressing are also options.



2

This view from the driver's seat shows three of the four locks on the motorcycle. The gas lid lock has a chrome facecap and is located in the center just forward of the seat. The fairing pocket lid lock has a chrome facecap and is located under the right handlebar. The ignition/steering lock has a black facecap with white writing and is located in the center just below the instrument panel.



Pick the gas lid lock 90 degrees clockwise against spring pressure and open the lid before releasing the turning tension or it will relock. The wafers are on the bottom of the keyway. This was not an easy lock for me to pick. I spent about 5-minutes picking it before it opened for me. If you have trouble picking this lock and the fairing pocket lid lock, the trunk lock was much easier to pick.



4

The code is stamped on the back of the gas lid lock. It consists of six numbers and letters but only the last three are the code. In this case the code is C16 so cut 32311 onto an X138 blank and you will have a working key. If you need to disassemble the lock, remove the retaining clip.



5 The gas lid lock is shown removed with the gasket and retaining clip. The locking bolt needs to be retracted into the lock by turning the plug before the lock can be removed from the gas lid. If you pick the lock with the intention of removing it, do not release the turning tension until you have removed the retaining clip and lock from the gas lid.

The facecap has been removed which allows the plug to be pulled out the front. This frees the locking bolt and spring so they can be removed. There is a post that the locking bolt spring has to be placed over when reassembling. All five wafer tumblers are present in this lock. An ASP P-19-201 Honda facecap fits this lock perfectly.



7 The wafers from left to right are depths 32331. The #1 & #3 depth wafers are bronze and the #2 depth wafer is silver in color. This makes for an easy lock to read by looking into the keyway with a reading tool. The silver wafers are #2 and there is a big difference in the height of the #1 & #3 wafers. This lock uses the ASP A-19-101 keying kit, which is also used on Honda automobile door and trunk locks throughout the 80's.



#ALS - 1

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8

The fairing pocket lid is shown removed from the fairing pocket. The lock is identical to the gas lid lock except it is mounted upside-down, therefore the wafers are on the top. Pick the lock 90 degrees clockwise against spring pressure; lift up the end of the lid that the lock is mounted on, and pull the lid back and off. This lock was also difficult to pick.



A close look at the back of the lock reveals the code C16.

10



9

The bottom of the fairing pocket lid shows the locking system.



If you need to remove the lock, remove the two Phillips screws, locking tabs, bracket, retaining clip, lock, and gasket. It is necessary to retract the locking bolt into the lock before it can be pulled out of the mounting hole. Disassembly of the lock is exactly the same as the gas lid lock.

11



12

The trunk lock is located in the center on the rear of the motorcycle. If the keyway is vertical as shown in the photograph, the trunk is locked. If the keyway is horizontal, the trunk is unlocked as the key can be removed in the unlocked position. There are 3 levers under the rear of the trunk that can be seen at the bottom of the photograph. When the trunk is unlocked the center lever opens the trunk, the right lever opens the right saddlebag, and the left lever opens the left saddlebag. Pick the lock 90 degrees clockwise to the unlocked position, pull the center lever, and open the trunk. This lock was consistently fast and easy to pick using a rake.



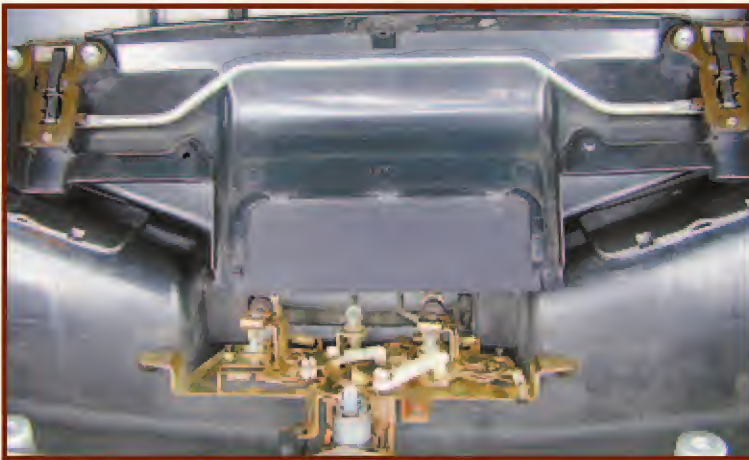
13

With the trunk open you can see five Phillips screws along the top edge. You need to remove the right pair and the left pair so the latch assembly/lock cover can be removed. You only need to remove the center screw if you intend to remove the lock.



14

There are three Phillips screws inside the trunk that have to be removed to free the latch assembly/lock cover. The screwdriver is shown removing one. There is one in the same place on the other side, and the third is located in the center on top. The recessed hole the third screw is located in appears in the upper right section of the photograph.



15

The latch assembly/lock cover has been removed and is lying on the bottom of the trunk. This exposes the trunk lock, which is in the bottom/center of the photograph. Notice the silver colored bar that runs between the two latches on the latch assembly/lock cover. When remounting the latch assembly/lock cover it is extremely important that this bar be placed under the black tab that is shown to the left of the lock. Failure to do so will result in a trunk that will not open after it is shut. Test to make sure the latches are moving to open the trunk before you shut the trunk lid. The black tab is better shown in the upper right section of photograph 21. The code is located on the bottom/left side of the trunk lock.



16

Place a dental mirror under the left side of the trunk lock and you can read the code even though it appears reversed in the mirror. The code is C16. Cut a key by code, reassemble everything, and the job is done.

If you need to remove the trunk lock, remove the four Phillips screws that hold the bottom trunk cover on. The screwdriver is on one and another is in the recessed hole just to the right of it. There are two more in the same locations on the other side.

17





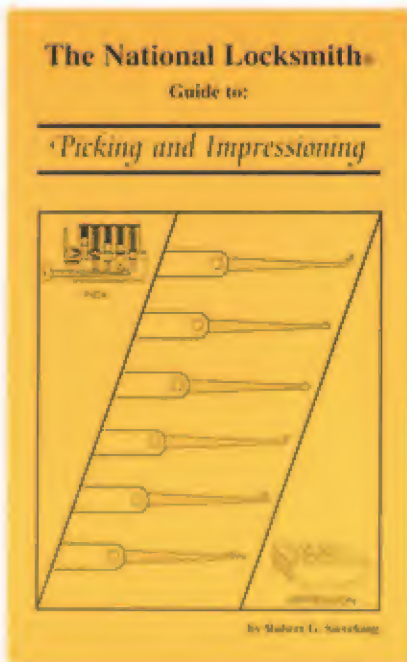
18 Once the four screws are removed, you can drop the bottom trunk cover down and pull it back and off the motorcycle.

Remove the four Phillips screws and two 8mm acorn nuts that hold the taillight lens on. The screwdrivers are inserted into two of the screws and there are two more in the same locations on the other side. The 8mm socket is on one of the acorn nuts and there is another in the same location on the other side.

19



20 The taillight lens has been dropped out of the way so you can remove two Phillips screws that secure the trunk lock assembly. If you have not already done so, remove the center screw in photograph 13.



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#PI

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21 Remove the retaining clip that secures the trunk lock to the assembly. The black tab that you need to place the trunk latch rod under during reassembly is in the upper right section of the photograph.



22 You can now move the trunk lock assembly out far enough to remove the lock.



23 The trunk lock and retaining clip are shown removed from the assembly. The tailpiece points up when the lock is installed, so by using that as a reference you can now see the location of the code on the lock. Remove the gasket, C clip, tailpiece, and return spring.

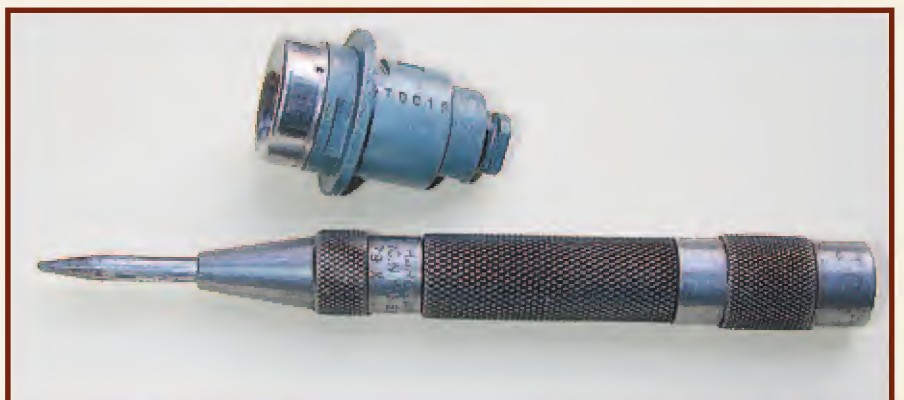
24 Place the lock in a vise as shown. Do not tighten the vice as you only need to support the flange and you do not want to grip the facecap. Tap on the back of the plug with a hammer and the facecap will be forced off. This facecap has been partially removed and is about to



come off. Be sure and catch the facecap and plug to avoid spilled wafers or damage.



25 The trunk lock is disassembled. From left to right is the gasket, facecap, plug, cylinder, return spring, tailpiece, and "C" clip. All 5 wafer tumblers are present in the lock and the #2 depth wafers are silver in color so this is an easy lock to read. This lock also uses the ASP A-19-101 keying kit.



After replacing the plug and facecap, a tap with a spring-loaded center punch in each dimple secures the facecap.

26



27 The ignition/steering lock is very time consuming to remove because of the fairing. The service manual shows the procedure and it involves removing the seat, side covers, radio/cassette player, CB radio, air pressure controls, fairing pockets, top cover, instrument panel, windshield, fairing, ducts, and

other parts with numerous fasteners and connectors. The Honda dealer charges for 5 hours labor to do this job. It is not practical to show this lengthy procedure in a magazine photo article. As a locksmith I have my limit on how much non-lock related work I will do in order to gain access to a lock and the ignition lock on this motorcycle has exceeded it. I will require the customer to either remove or have this lock removed before I will work on it.

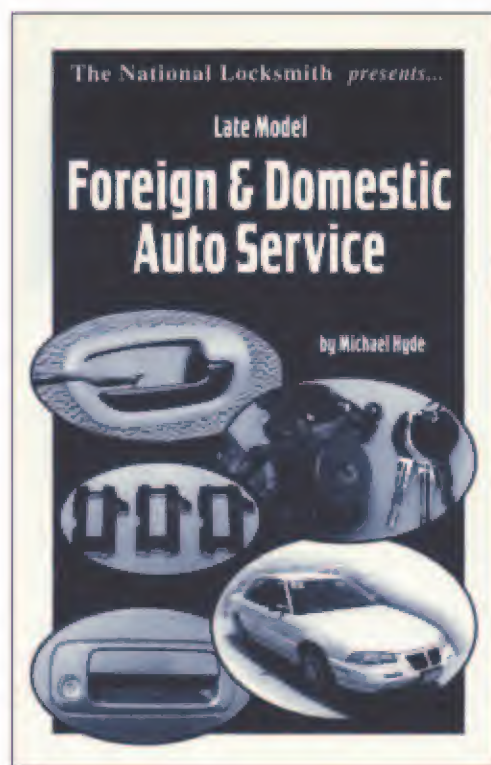


28 The original key is on the left with the code stamped on it. The key on the right was cut by code and works all of the locks perfectly. The locks are available at Honda motorcycle dealers.

Lock Set: Part Number: 35010-MNS-020, Price \$139.20
Ignition/Steering: Part Number 35100-MT8-771, Price \$113.50
Gas & Fairing Pocket: Part Number: 37220-439-007, Price \$28.78
Trunk: Part Number: 81312-MNS-000, Price \$31.91
Codes: A00-A99 & B00-B99 use Ilco X84 (HD74), Curtis HD74, Silca HON39
Codes: C00-C99 & D00-D99 use Ilco X138 (HD75), Curtis HD75, Silca HON31
Spacing: 1=.098 2=.197 3=.295 4=.394 5=.492
Depths: 1=.276 2=.244 3=.213
HPC Card Number: CMC37
ITL Number: 214
Curtis: HD-4 cam & HD-8A carriage
Tumbler Locations: **1 2 3 4 5**
Ignition: x x x x x
Gas: x x x x x
Fairing Pocket: x x x x x
Trunk: x x x x x

TNL

Foreign & Domestic Auto Service



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#FDAS - 1

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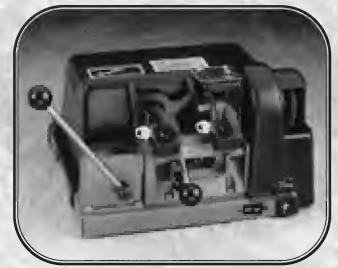
1st Prize

*HPC's 1200PCH
Punch Machine*



2nd Prize

*Mas Hamilton's
PowerLever 2000*



3rd Prize

Curtis 2200 Duplicator



4th Prize

*SDC Magnetic Lock,
Keypad and Exit Switch*



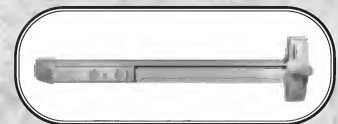
5th Prize

*Securitron 12-Volt Unlatch Plug in
Trans & Touchpad Retail Value \$650*



6th Prize

LaGard "SmartGard"



7th Prize

Detex Advantex



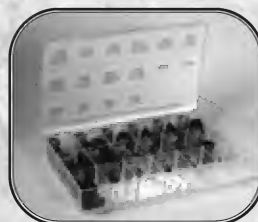
8th Prize

*Arrow 400 Series Alarmed
Exit Device & S-75 Mounting
Plate Kit for Narrow Stile
Aluminum Doors*



9th Prize

\$500 in BWD Products



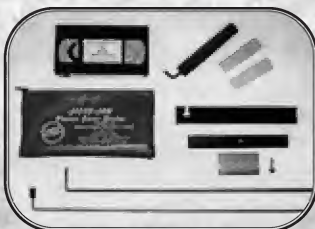
10th Prize

\$500 in ASP Auto Locks



11th Prize

\$500 in Strattec Auto Products



12th Prize

Tech-Train "Jiffy Jack"



13th Prize

*Sargent & Greenleaf 6120
Electronic Safe Lock*



14th Prize

*High Tech Tools
2000 Pro Set*



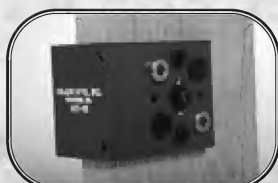
15th Prize

Slide Lock's Master "Z" Tool Set



16th Prize

ESP Products Sampler



17th Prize

Major Manufacturing's
HIT-111 Drill Guide



18th Prize

Abus Padlock's Marine
Padlock Display (\$120 Retail)



19th Prize

Mark Bates Associates
Falle Pick Set



20th Prize

Baxter JV-1 & JV-5
Code Books



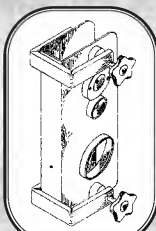
21st Prize

Sieveking Products
Squeeze Play



22nd Prize

Rodann's TX 500
RX 5990 Wireless Door
Annunciator System



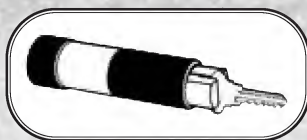
23rd Prize

A-1 Security Manufacturing
Installation Jig



24th Prize

Keedex Sampler



25th Prize

Framon
Impressioning
Handle



26th Prize

Gator Tool Multi-Purpose
Facecap Tool

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- **Wedgeco™ Key Extractor Kit**
- **Strattec Racing Jacket**
- **HPC Air Wedge™**
- **Sargent And Greenleaf 4400 Series Safe Deposit Box Lock**
- **A-1 Security Products**
- **ILCO Key Blanks (100 Blanks)**
- **Keedex "SPIN OUT" Screwdriver**
- **Tech Train Training Video**
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- **Major Manufacturing Products**
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- **LaGard Combo Guard**

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Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

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Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number or e-mail address.

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**Tips Start
on Next Page**





**BWD KWIKIT WINNER:
Miwa Key Extension Tool**

A customer requested that I retrofit a key locking mechanism on their sliding glass doors, so I decided to use a Miwa lock and key. The installation presented no particular problem and the lock worked great as long as the door was open. However, when I closed the door I found I could not operate the key because of the frame configuration. The door was an outside slider and when shut there was not enough room to grasp the key and turn it. I simply could not get my fingers between the key and the frame.

Photograph 1.



I didn't panic, but I did excuse myself on the pretext of taking a break, drove back to the shop and came up with the following solution:

Using a broken HPC pick, I removed the rivet on one end of the handle, pulled the center leaf out and cut it in half. Then I drilled a 1/8" hole in the bow of the key, placed the key in the handle and put a PopRivet® in to hold the key in position. (See photograph 1)

The key folds into the handle and the cut and dressed center section of the old pick can be folded out to give a little leverage if necessary.

After that modification, the keys slipped easily into the lock without my fingers getting in the way and the customer was very pleased with their unique 'folding key'.

*Fred Spencer
Pennsylvania*



**WEDGEKO KEY EXTRACTOR WINNER:
Dinner Fork Multipurpose Tool**

First, use a hammer to hammer the fork flat. Make sure all the curves are out of it. Then use a hacksaw to cut the two outside tines from an old fork and file off the rough edges. (See illustration A.) Use a pair of pliers to gently bend the remaining tines outward slightly and file the points down to a small flat similar to a #2 flat blade screwdriver.

With a little experimentation, you can adjust the bend of the tines to serve as a Kwikset cylinder removal tool. The modified fork can also be used to push retainer clips from various cylinders and can be used to depress the retainer on key-in-knob locks or for depressing the retaining pin on retainer caps.

Illustration A.



Jake's Jabber...



**by Jake
Jakubowski**

Every once in a while I run across an idea, product or company, that really elevates my enthusiasm levels. Recently, while searching for an "odd ball" cash register key for a customer, I had just such an experience.

A regular customer called and asked me to cut some cash register keys. It turned out that IBM made the cash register and the blank was one that I was totally unfamiliar with. I started searching and asking questions on the Internet when Leo Koulogianes, in Memphis sent me an e-mail and suggested that I call Blue Dog keys. Leo said Blue Dog had a 'key detective' that could find, match or deliver virtually any type, style or configuration of key I might need. That was saying a lot, but I had exhausted all my conventional sources so I called Blue Dog (1-888-667-1106) and explained my problem.

I was told to either fax them a copy of the key, or fax them a drawing of the key and its profile. I did and Liam Gribben at Blue Dog, faxed me back the key information that I needed and let me know that they had the blanks in stock, ready for delivery.

My enthusiasm meter went off the scale! I had made at least ten calls to suppliers, talked to other locksmiths and spent time on the Internet and Leo gave me one number to call that solved my problem... as well as others since.

The folks at Blue Dog do nothing but keys. They don't sell locks, door closers, or pins. They specialize in key blanks. Current keys, old keys, hard-to-find keys and odd ball keys. As Liam told me on the phone, "Any key which has ever been asked for in the last twenty years we stock!" And, what they don't stock, the chances are better then average that they can locate and provide the blank for you.

For instance: Blue Dog can provide you with all nineteen original Tri/Mark blanks, original Edsel blanks, original Falcon blanks, cash register blanks, and boat keys to name a few.

If you have an odd ball blank you're trying to locate, call the Blue Dog key detectives and see how quickly they can provide you with the answer you need to add some shekels to your pocket.

I am sure there are other uses for this multipurpose tool, including removing inside knobs and roses that utilize spring-loaded retainers.

*Alec Rathburn
Hawaii*

**STRATTEC WINNER:
Securing Thumb-Turns**



I had partially rekeyed an office complex and had left the keys with the owner on Saturday and told him I would return Monday to complete the job. The owner

came to the office on Sunday because he couldn't get into his office. It was rekeyed and when he left he left the new keys in the office.

I was unavailable Sunday so he decided to try to get in on his own. The front door had a thumb-turn on the inside and the customer used a stiff bent wire to try to manipulate the thumb-turn and unlock the door. He said it took him about ten minutes, but he was able to get in the building and retrieve the new keys.

Monday when I showed up he told me he was concerned that anyone could access his building the way he did. Then he asked me if there was anyway of preventing the same thing from happening.

I came up with the idea of reversing a dead bolt housing sleeve and attaching it to the door by unscrewing the thumb-turn and placing it in the cone shaped sleeve, using the thumb-turn to hold the housing on the door. The sleeve covered the thumb turn and prevented anyone from manipulating the thumb turn with a stiff wire since they would be unable to see what they were doing.

*Jim Landis
Pennsylvania*

Editor's Note: Jim, thanks for the tip. Unfortunately, you didn't mention the type of cylinder sleeve you used. KEEDEX makes a deep cylinder guard ring that would be ideal for this application.



**HPC WINNER:
Schlage D-Series Fix**

I had a Schlage D-series lock that would not lock when the inside lock button was depressed. I determined that the cone spring was broken, but I was unable to locate a spring for a Schlage D-series so I used one from an A-series.

I modified the Schlage A-series spring by bending one end to form a straight tailpiece, which fit into the hole on the D-series. The modification only took a short while and worked perfectly.

*Bill Wessel
California*



**SARGENT &
GREENLEAF
WINNER:**

Mortise Cylinder Tool

On several jobs I encounter a

mortise cylinder that has been tightened down too tight or is too corroded to turn by hand. I have also found that if you use Channel Lock® pliers or similar device, you run the possibility of causing damage to the cylinder's surface, i.e. gouging or scratching the edge of the cylinder. I've tried to cover the lock with padding and then used the pliers, but I was still not satisfied with the results. I have overcome this problem with the following modification to the pliers.

I purchased a pair of Channel Lock® pliers and a can of PLASTIDIP, a heavy-duty flexible rubber coating. I dipped the jaws of the pliers in the coating material, following instructions on the label and allowed the PLASTIDIP to dry. I repeated the process several times until I got the proper amount of coating on the jaws to prevent damaging the locks. This modified tool works very well for me and prevents the scratch and gouge marks on the cylinders.

*David T. Walker
Indiana*



**ILCO KEY BLANKS
WINNER:**

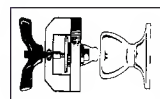
**I/C Cylinders Simplify Panic
Hardware Rekeys**

I have a number of commercial accounts where I have to rekey the panic devices every time I rekey the other locks after an employee change. I've always found it frustrating to remove the device, remove the cylinder, rekey the cylinder and then reassemble everything.

I got the idea of using an interchangeable core on the panic devices even if the other doors used a standard cylinder. I sold the customer on the idea and now when I have to rekey one of the panic devices, I simply get out the control key, remove the core, rekey it and replace it, while leaving the panic device on the door.

The customers like their "special" key for outside entry on the doors equipped with panic hardware and I save time when it becomes necessary to rekey them.

*Pete Gamble
North Carolina*



**A-1 SECURITY
PRODUCTS
WINNER:**

Ryder Truck Code Location

On all Ryder trucks that I have run across there is an aluminum tag

secured to the right (passenger) inside doorframe between the windshield and door window. This is a direct digit code, or at least the ones I have done appear to be.

All the ones I have done have been Ford products with either five or eight cut keys. This sure does speed up the process of cutting a key. It might be a good idea for security purposes, not to let the customer see what you are doing.

*Marc Grizzard
South Carolina*



**KEEDEX WINNER:
Opening Tool
Organizer**

I have High-Tech's car opening set and really like it. However, no matter how carefully I open the plastic case they come in, either the tools wind up on top of the books or vise-versa. So, I decided to find a way to keep the two separated.

If you look at *illustration B*, you can see how I cut a 1/8" piece of Masonite to fit the case opening where the tools are located. The Masonite was cut to fit the inside edge of the tool case and rest on the lips of the molded sides where the board I cut will lay flat.

Then I cut a piece of Masonite into a strip 5/8" x 24" and glued it to the bottom side of the cover I cut. I applied glue to this strip and glued it to the larger board 5/8" from the bottom edge as shown. This keeps the tools from sliding out from under the cover.

Next I straightened out a common wire coat hanger and cut a piece 13-3/4" inches long to use as a retainer for the tool cover. Bend it as shown in the illustration.

Open the tool case and place the tools in the bottom (shallow side). Then place the piece of Masonite with the lip down into the case and toward the hinge side. If the lid does not lay flat, distribute the tools until the lid rests on the lip around the case.

Put one end of the hanger in the hole that you drilled on the hinge side of the case. The other in the hole near the handle of the case. The hanger keeps the Masonite in place and the tools are held in place with the lid. The books are in the upper compartment of the case and do

not get torn or soiled from being in contact with the tools.

*Mike Strobusch
Wyoming*



**TECH-TRAIN
TRAINING VIDEO
WINNER:**

Waterproof Car Opening Info

Whenever it is raining or there is a heavy mist and I remove a sheet from my car opening manual to carry to the car I am working on, I wind up with a wet information sheet. To solve this problem, I went to the grocery store

and bought a box of ZipLock Sandwich bags. These bags come in various sizes that will fit nearly any sized manual sheet.

Now I can slip the sheet into the bag, place it on top of the vehicle for easy reference and it stays dry and clean. No more wet, dirty or mutilated car opening info sheets for me.

*James Garrigan
Oklahoma*



**SIEVEKING PRODUCTS
GM E-Z WHEEL
PULLER WINNER:**

Opening Tool Extender

Anyone using an Air Wedge or Jiffy Jack might find this home made tool useful.

I modified a tool that I use for pulling wire for a Mag lock installations to work as an auto tool. (See illustration C.) The 6-foot green

fiberglass rod with female bullnose end is easily modified to function like a 6-foot across the car tool. It is great for reaching low slung lock buttons or releases.

Supplies needed: A 6' green fiberglass rod with a female bullnose connector on one end and 8' of fly fishing line or any monofilament line you might choose. Cost: \$13.95

Drill a small hole half way up the brass bullnose end of the rod. Double the end of the line and thread it through the hole. Tie it at the hole leaving a looped end on one side and the long end strung to the other end. Drill a small hole 3/32" on the other end of the rod. Attach the end of the line to this hole. Leave the line 6 to 8" longer than the rod. To create a snaring loop on this end, double the end of the line and thread it through the bull nose end.

If you want to manipulate the end with the snaring loop, attach a second line to the hole you drilled. It works similar to a Lemon Pop.

The green rod can be obtained from SES (Security Equipment Supply) at one of the following

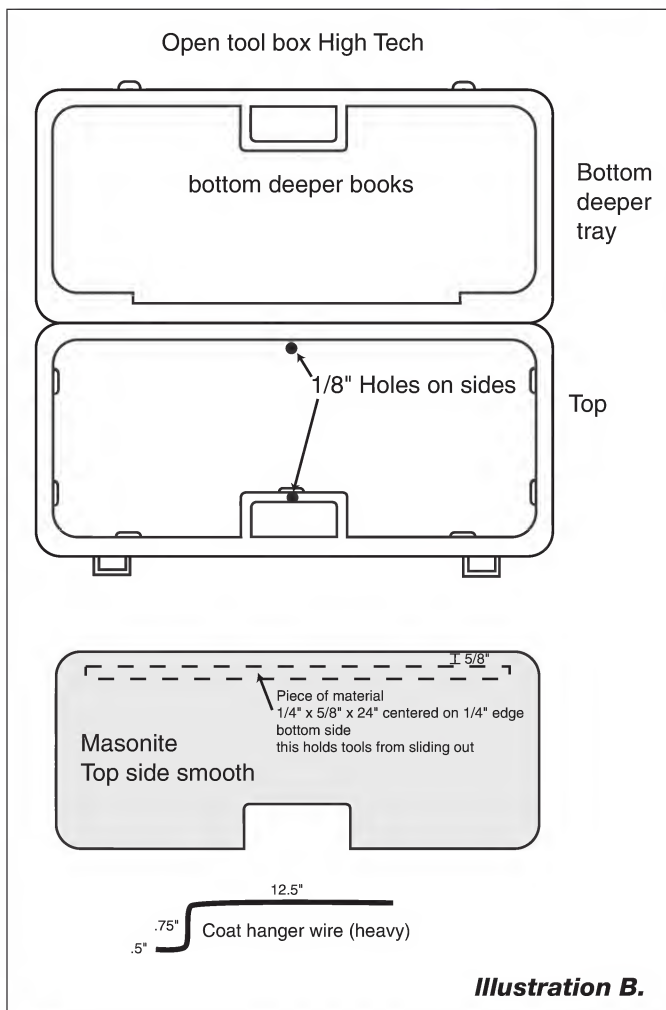


Illustration B.

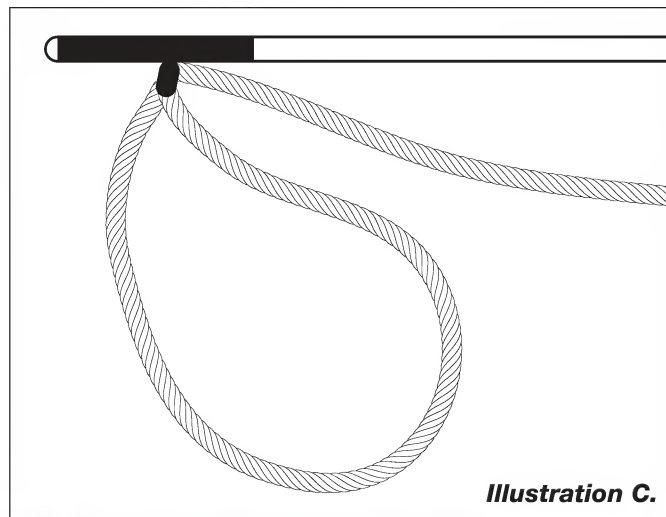


Illustration C.

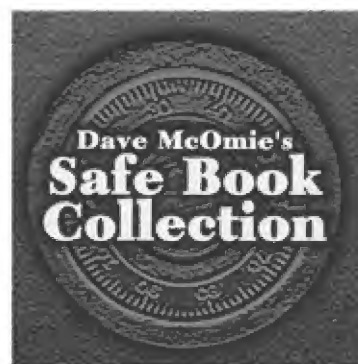
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#DMCD - 1



locations: Memphis 800-475-4850; St. Louis 800-325-0221; Indianapolis 800-326-1882; Detroit 800-548-0680; Chicago 800-729-1306.

*Leo Koulogianes
Tennessee*

Major
MANUFACTURING, INC.

MAJOR
MANUFACTURING
PRODUCTS
WINNER:

Y157 Makes Handicap Key for GM

A customer wanted a duplicate of her GM 10-cut key made. We were out of the P1110 blanks and she didn't want the P1106 because the head was too small and it was obvious, from the looks of her hands that she suffered from severe arthritis.

Her car was a Chevy Impala with an in-dash ignition. I asked her if she would let me try something I had wanted to do, and if it worked - the first key was on me.

Since there was no VATS or transponders used on this model, I grabbed a Y157 and slapped it in the duplicator. The first key I cut was bottomed out in the jaw of the duplicator and was cut much too deep. Using a second blank, I rested the milling on the edge of the jaw and cut each side like I would a

Ford key. This time, the key worked perfectly.

The customer liked the Mopar key better than her original GM key since the large head was easier for her to grip and manipulate and she had me cut her three more.

This will work on the in-dash ignition since there are no ears on the ignition. However, I don't think it will work on an in-column GM. But it did work for this lady and she was grateful for the extra leverage the large Chrysler bow gave her.

*Frank Alexander
Florida*



**SLIDELOCK'S "Z" TOOL
OPENING SET WINNER:
Another Supra Trick**

With a little practice Supra Key Boxes that have the push buttons and a reset button that is narrower than the "OPEN" button can be opened in less than 30 seconds.

First, press "Clear". Then press #1. Now press and hold the OPEN button. Then press "Clear."

At this point one of two things will happen. The pressed button (#1) will click and pop up, or the button pressed will stay down and not move.

During the opening procedure, record all of the button numbers where you hear a click and the button pops up.

Repeat the procedure for buttons 5 through 10.

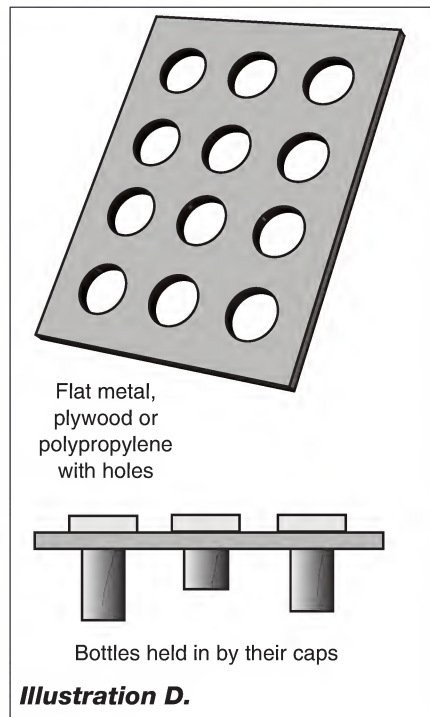
After recording the numbers of all the buttons that clicked and popped up, clear the keypad and press the buttons whose numbers you recorded. Those numbers are the code and will allow you to open the box.

*Larry Schlemmer, CRL
Arizona*



**THE SIEVEKING
AUTO KEY GUIDE
WINNER:
Old Medicine
Bottles For Small
Parts**

I was looking for a way to store small parts like the cams and carriages of my Curtis Clipper and assorted screws, nuts and bolts. After looking around I came across an old medicine bottle and thought several of these would do nicely. The only thing was I didn't want a bunch of bottles rolling around in the truck.



Flat metal,
plywood or
polypropylene
with holes

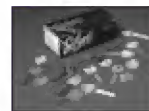
Bottles held in by their caps

Illustration D.

I found an old piece of flat aluminum and cut holes in it which are just large enough to let the medicine bottle slide into the hole but will not allow the screw cap to follow. Consequently, the cap keeps the bottle from dropping out through the hole. (See illustration D). The aluminum can be attached with brackets to nearly any surface in your truck.

If you go to your local drug store, they will sell you all the bottles you need in assorted sizes. You can make holders for nearly any small parts that you wish.

*K. Chambers
South Carolina*



**JET KEY BLANKS
WINNER:
Kwikset Key Gives
Code**

I recently had to rekey a lock for a customer that utilized an IN3 keyway. I only had three IN3 key blanks on the truck and no code machine or other information on spaces and depths. Since the customer requested three keys, I didn't have any room for error.

I used a Kwikset pre-cut key as the guide key and cut the three IN3's as duplicates of the Kwikset key. I realize that the spacing and depths are not exact but this gave me a working key and a happy customer. It was necessary to adjust the pinning somewhat to ensure that the cylinder worked smoothly.

**Door Lock
Encyclopedia**



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#DLE



the essence of OBsolescence



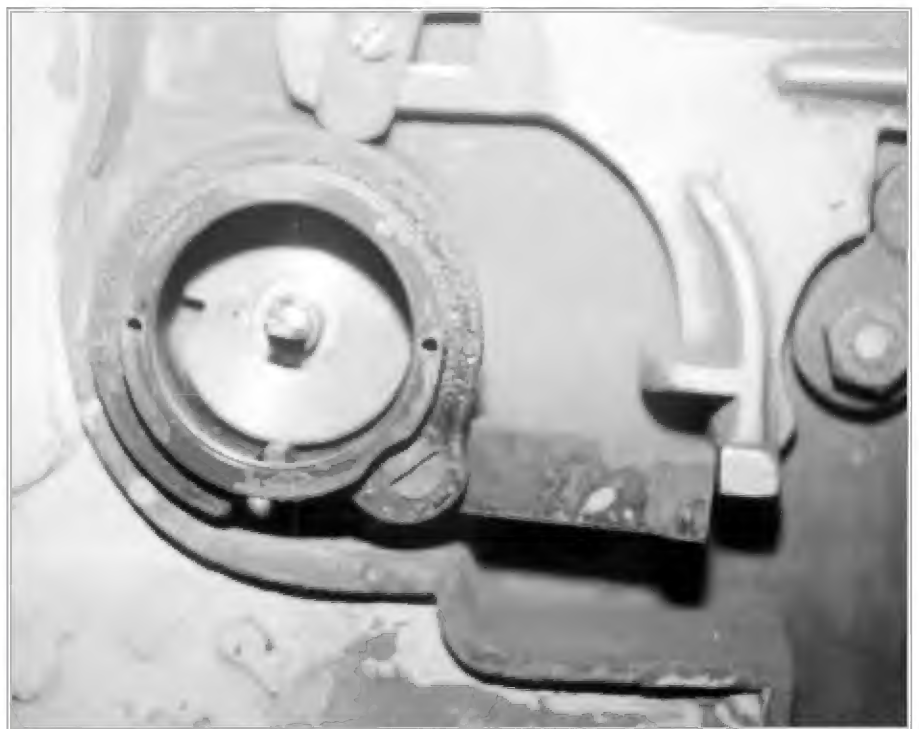
by Dale W. Libby, CIMS



1. Typical handle and dial (YALE) on Mosler Safe that indicate a possible OB type lock.

Everyday safecrackers are meant to be supermen (or superwomen) in the eyes of the customer who has a locked up safe or money chest. They expect us to drop everything we are doing no matter the day of the week or the time of day. Then they want us to rush immediately to their location and quickly solve all their problems. Much easier said than done.

Not only are we expected to wave our hand and say a few magic words to open this unit, and we are expected not to charge much for our expertise. The better we become as professional safe technicians and safecrackers, the easier it becomes for us, not the customer. The case in point is knowing all about new as well as old obsolete safe locks. The case in point is the old Mosler safe I opened recently in the bowels of an old drug store on the north shore of Lake Michigan in a northern suburb of Chicago.



2. Inside view of OB lock in the locked position.



3. When the lever drops, the bolt bar can slide over the end of the lever.



4. OB lever cannot be forced above the bolt bar end in this lock

My axiom for cracking safes has always been attack the lock, and the safe will open. We do not care whose name is on the safe or dial, we attack the lock first. This rule works most of the time on newer safes as well. The lock in question is shown in *Photograph 1*.

Standard set up for a Yale OB type safe lock. A round "T" handle with the dial adjacent, and the giveaway in this case is the name Yale in the center of the dial.

OB gravity lever locks came in all sizes and varieties. I have seen two, three, and even four wheel OB locks. Except for the number of wheels, and a few improvements, they are all the same. The invention of the OB lock was an improvement over the straight tailpiece type of safe and vault locks used by many early manufacturers such as the Hall Safe Company. The same straight tailpiece lock is still used by many foreign safe manufacturers (on the low cost end) and Sentry Safe today. OB technology then was a quantum leap forward in security against manipulation.

With straight tailpiece locks, when pressure is put on the handle and the dial was turned, gates of the drive wheel could be felt and possibly other gates as well. False gates were then added on the drive wheel, but still the combination could and can still be mapped out with wires and rulers through straight tailpiece manipulation.

The basic OB style configuration is shown in *photograph 2*. In this photograph, the wheel pack is removed and just the drive wheel is shown. The gate is next to the cover attaching screw hole at 9:00 in this picture. The lever is held in the upright position and blocks the movement of the bolt bar. The good thing about this arrangement is that when pressure is put on the opening handle, no force is transmitted to the wheel pack. Wheel gates cannot be felt when pressure is put on the opening handle, and thus manipulation is more difficult than a straight tailpiece type of lock.

Before working on any old non-group II type lock, I always first count the wheels in the combination lock, and then I put pressure on the opening handle and turn the dial. This tells me right away if the lock is direct drive or not. It may not tell me if the lock is an OB type though.

Counting the wheels is important. This is accomplished by first turning the dial 4 or more time and stopping on 60 (or any other non-drop-in area on the dial) and then reversing the direction of your turns, and count the clicks or pick ups of the wheels at or near 60 or your starting number. It has become an important habit. Not only does it tell me the number of wheels, but gives me a feel for how the lock is working.

The opening of this Mosler safe made in Chicago could not have been easier. I noticed a good feel for

the left contact point of the drive wheel while counting the wheels. The left contact point is felt when turning the wheels to the right, no matter where the drop in area is located. It was such a strong contact point, that I decided to try and manipulate the safe open.

It proved to be the right decision. The safe was located at the bottom of a steep staircase, around a corner, through a small closet to a dark storeroom. With my mag-light in my teeth, I quickly ran a five and zero manipulation sequence to see if I could pick up any numbers. Imagine my happy surprise when I picked up a number on each of the three wheels. When I put the numbers, 35, 90, and 60 in the correct order, the dial stopped and the safe opened.

Speed manipulation is accomplished by using only one contact point. In the beginning, I learned manipulation through Lockmasters, which taught two-point contact reading. For the purist, some things will never change. Once you become proficient at dialing locks open, you can use shortcuts that work for you. Starting out with just dialing the numbers that end in 5 and 0 will allow only a 20 number rotation try out for the first series of turns. If you hit it on the first series, then there is a good chance that you will be able to get the lock open easily and quickly.

The customer was flabbergasted at how easy the opening appeared to be. It took only 12 minutes. I was happy

not to have to drag all my tools through the ancient maze of the basement of this drug store, not even counting the wicked staircase that was hard to transverse when carrying nothing but my clipboard and camera.

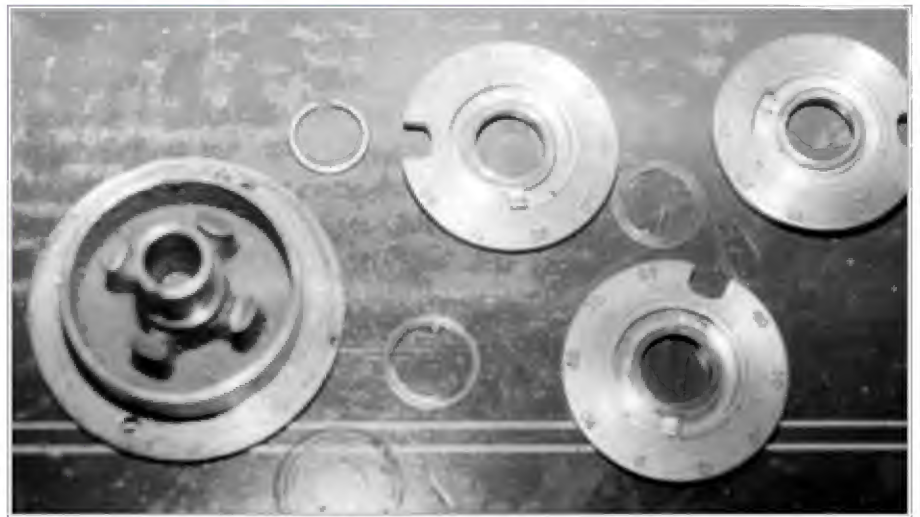
Photograph 3, shows the OB lock in the open position. The lever has dropped or been pushed up into the wheel pack thus lowering the weighted end. This allows the bolt bar to slide over the end of the OB lever and the bolts will be withdrawn and the safe will open. Pretty simple. Drilling is always an option, but a dangerous one.

The position that is usually the standard point of penetration is outside of the dial ring at about 47 or 48. One must drill outside the dial ring and angle up towards the fence at the bottom of the lock, just coming in at the end of the lever. The point that you are drilling for is the small space between the end of the lever and the fence as it goes into the wheel pack. There is ample room (if your drilling is right on) to use a good bore scope and dial the unit open.

However, there is also a good chance that you might hit the end of the lever or some other internal important part of the lock. If you are planning to put the safe back into working order, take your time and check your progress carefully. Parts for the OBsolete locks are hard to come by.

Trying to drill along the side of the round outer wheel case is also hard to do. One must be careful not to damage the case or the wheels themselves. The readings should be transferred to the drop-in point at about 50 or 6:00. If you want a quick way into most any OB safe, I have always drilled straight in at number 60 on the dial. This location will usually hit the lever bar near the heavy end. Once you hit this point, you have many choices. You can drill the lever until it breaks, you can push the lever and knock the screw post off, or you can just break the lever. Either way, the safe will open, and it will not be repairable.

Another facet of this type of OB lever arrangement is seen in *photograph 4*. I have used my 'ham handed' finger to push up the lever. In this lock, there is a blocker part on the locking bolt (a nest, as it



5. Exploded view of wheel pack and curb.

were) to stop the lever from going up past the end of the opening bolt bar. Why is this necessary you might ask? In the early days when the OB type safe lock was introduced, some enterprising Yegg discovered that if you turned one particular safe that used the OB type lock upside down, the heavy end of the lever would raise above the end of the bolt bar, (being upside down) and the handle could be turned.

Before opening the door, it was advisable to turn the safe over, or on its side, so the door would not fall off on your foot. When the safe companies and the lock manufacturers realized this, they put in pins, screws, or a "nest" like in this safe to thwart a potential safe tipper. Most popular OB type locks incorporate some mechanism to keep the lever from being compromised in this fashion.

The wheel pack consists of three hand change wheels and spacers. See *photograph 5*. If you ever mix up a wheel pack like this, it is easy to sort out. Both the first and the third wheel will have the gate cut out on the same numbers. In this lock, the first and third wheels are gated at number 50. The second wheel will always be gated differently, in this case at zero.

Sometimes, the wheels are stamped with a 1, 2, or 3. This signifies the first, second, and third wheel of the lock which also means the first number, the second number, and the third number of the combination. In a three wheel lock,

the number 3 wheel is always next to the drive wheel or cam while the first wheel is furthest away. Makes no difference if the driver is front or rear mounting.

The last part of the OB story is that the combination should be set with the last direction of the dial to be turned to "Stop". Since there is no bolt to pull back, the lock is open when the drive wheel allows the lever to raise up into the wheels and the drive cam. If the lock is working correctly, and it should be since you just serviced it, then the last turn will be to "Stop". The dial will stop turning when the lever raises.

There is no correct way to sequence the turns on this lock. The directions can be 4 times left, 3 times right, 2 times left, and right to stop, or it can be 4 times right, 3 times left, 2 times right and left to stop. Since this lock incorporated movable flies, the combination was the same in either direction.

Once I explained to the customer what "Stop" meant, he was dumfounded. He told me that the dial had never stopped before. (It really did, he just did not know or remember it.) I stated that for security reasons, I had added that feature to the lock for his benefit. If the dial does not stop, the safe is not open. He tried it several times and was very happy to get this antique into service after 35 years of being locked.

Manipulate open and Prosper!

TRL

The UGLIER Side

Saving the Day



by
**Sara
Probasco**

Halloween is a big “celebration” day in Uvalde, as it seems to be in many locales across our country. The kids participate in a costume parade down main street; there’s a city-wide festival for all ages complete with games, treats, costumes, and contests; some of the area churches hold “Harvest Festivals” - a safe-and-sane alternative to more outrageous gatherings offered here and there; many clubs and individuals throw costume parties. Probably the most obvious observation of the day is the way employees all over town wear costumes to work. So long as it’s all in good fun, we have no objection to this practice, but we do discourage our employees from wearing ghoulish costumes.

One year, Don pulled out his tattered Batman costume from a costume event of years past, and leaped out to terrify the world. Another time, he was dressed as an ancient Chinese sage, wearing a blue “happy coat.” The costume was completed by a “wig” made of black panty hose braided to hang down his back. That year, he set back the wisdom of the ages by at least a century.

Last year, Don didn’t wear a costume.

Some of the others did, Keith being one. Keith was accompanying his young son to a school costume party, so he was “clocked out” early that afternoon, agreeing to pull service calls, as needed. Naturally, he was needed. Everybody else was working out of town or was otherwise unavailable when a call came in from a local business. The door lock to the women’s restroom was malfunctioning and they needed help, right

away! It seemed a simple job, so Keith jumped to the task.

Dressed in a flowing red cape, Mickey Mouse ears, and a Mighty Mouse T-shirt, he leaped into the entry foyer of the business, struck a pose, and sang forth, “Here I come, to save the day!” He was only slightly off-key.

After everyone recovered from the shock of his entrance, they explained the problem with the door lock.

“Somebody gets locked in or out of there at least once a day, and has to jiggle and shake the lock to get it open,” the receptionist said. “I’m just afraid that one of these days, we’re not going to get it to work at all, and somebody will get stuck in there.”

“Stand back,” Keith commanded with a flourish. “I’ll have it fixed in a jiffy.”

Everybody went back to work, confident that “Mighty Mouse” would, in fact, “save the day.”

Keith took the lock apart, tinkered with this part and that until he was satisfied, then re-installed the lock in the door. Working it from one side and then the other, everything

seemed to operate smoothly. Taking a deep breath, he closed and locked the door from outside the restroom. No problem. Then, checking to be sure no one was inside, he stepped in and closed the door. Everything seemed fine.

He turned the latch. It was a bit ragged, but no real problem. He unlocked it. Still working. Pleased with himself, he locked it one more time, just to be sure. Then he turned it back again to open it. Nothing happened. He repeated the process. The lock would not operate. It suddenly dawned on him that he was locked inside the women’s restroom.

After banging, twisting, jiggling and shaking the door lock to no avail, He pressed his ear to the door and listened. The restroom was not in a frequently trafficked area of the building, but he thought he heard a woman’s high-heel shoes clicking on the tile floor, coming his way.

Timidly at first, then more boldly, he rapped on the door.

“Hello, out there,” he called. “Can anybody hear me?”

The secretary stopped dead in her tracks outside the restroom door.

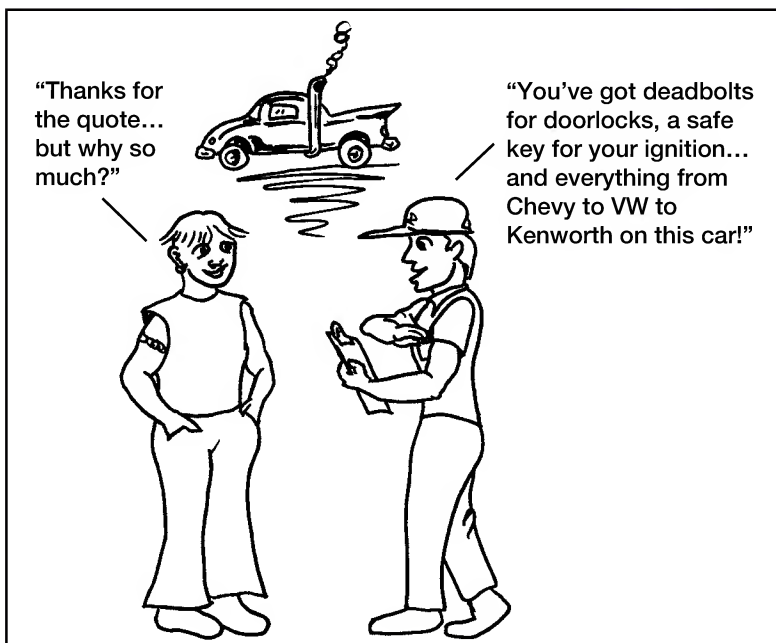
“Hello?” Keith called again.

She looked both ways, glanced at the “women” sign and stepped closer to the door.

“Hello?” she responded timidly.

“Thank goodness,” Keith said, sighing in relief. “I’m trapped in here. Would you try opening the door from your side?”

Glancing at the “women” sign again, the secretary shifted her papers to one arm and turned the doorknob. The door swung open.



Straightening his cape and ears, Keith charged out.

The secretary staggered back, stunned by the sight of this man in full Mighty Mouse regalia bounding forth from the women's restroom.

"Wh-what's going on here?" she asked.

Only then did Keith realize what this must look like to her. "Oh, this," he said, indicating his costume. "This is just make-believe. I'm really a locksmith."

"Sure you are," she said, hastily making her way back up the hall to summon security.

"It's that weirdo with the red cape and black ears that's been hanging around the women's restroom all afternoon," Keith heard her tell the receptionist.

After he got everything straightened out with the main office, Keith went back to work on the door. He decided to enlarge the latch plate opening a bit, as part of the problem seemed to be a general settling of the building that had thrown off proper alignment of the opening and the latch inhibiting smooth operation of the

bolt. He threw the bolt as far as it would go and reached to mark the spot for filing.

However, in the confusion of costumes, his son's school party, and the general hubbub of the afternoon, Keith had managed to misplace the colored marker he usually carries for just such a purpose. Pawing through his tools, he could find nothing else to use, so he walked down the hall to the reception.

"Excuse me," he said politely to the receptionist. "Could I borrow your lipstick for a minute?"

She cast him a scolding gaze that would have singed the hair off a hog.

"What's the matter, honey," she smirked, "leave your purse at home?"

"I have never been so embarrassed in my life," Keith sputtered the next morning, upon telling us of his great Mighty Mouse adventures. "I felt like a perfect fool."

Don reminded him that not everyone could be perfect.

Nobody wore costumes at our store on Halloween this year. Keith says he may never wear one again. **TRL**

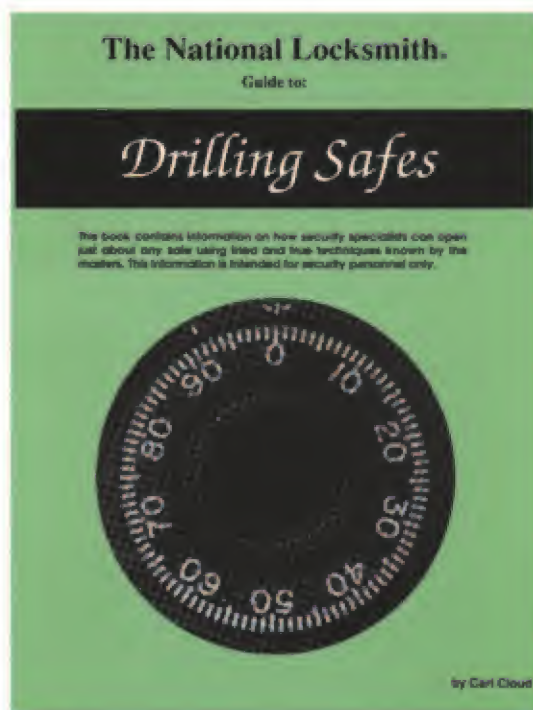
Diary Of A Safeman



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#DIARY

Drilling Safes



One of the most expert satemen in the country, Carl Cloud has written a very important book on safe opening.

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#DS - 1

Quick Entry

UPDATE

by
Steve
Young



2000 CHEVROLET IMPALA

The 2000 Chevrolet Impala is GM's attempt to fill the void left by the Chevrolet Caprice, which was discontinued in 1997. (See *photograph 1.*) While the Impala is slightly smaller than the Caprice, it still provides many of the features that the Caprice was known for. GM expects to sell a lot of Impalas as family sedans and as police and fleet vehicles as well.

One interesting feature of the 2000 Impala is the new inside trunk release. Mounted on the inside of the trunk lid is a lever handle that will open the trunk when pulled. This lever is illuminated continuously by a softly glowing Light Emitting Diode (LED) that uses very little power. GM has done a lot of research on how to prevent children from becoming trapped inside of car trunks. It is hoped that this new trunk release will help prevent tragedy. It also gives locksmiths another option for opening the trunk in the case of a lock failure.

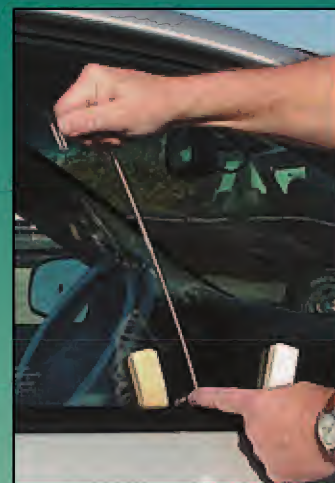
The in-dash ignition is going to present an interesting problem to locksmiths. This lock can be serviced easily as long as you have a working key. If the lock has failed, or there is no working key, the entire lower half of the dash will have to be removed. While there are tools on the market to pick the in-dash ignitions, such as the GM sidebar pick set from R&D Tools and the PS3 from A-1 Security Mfg. Co., these tools require that the lock be in working order. If you are dealing with a lock that has failed, whether from mechanical failure such as a stuck tumbler or raised spring retainer, a theft attempt or vandalism, these tools will not be of any help in removing the lock.



1. 2000 Chevy Impala



2. Wedge open the window and insert the short end of the TT-1003 tool.



3. Lever the linkage toward the front of the car to unlock the door.




4. The inside lock control linkage is the upper of the two linkage rods.

Fortunately, it is not necessary to remove the ignition lock to generate a new key for the Impala. Since cuts 3 - 10 can be obtained from the door and the trunk locks, or the door and the glove compartment lock, it is a relatively simple matter to obtain cuts 1 and 2 by progression. Locksmiths have been doing this type of progression on vehicles equipped with the 6-cut GM trunk lock for years.

To unlock the Impala, begin by wedging open the weather-stripping at the base of the window just forward of the outside door handle. (See photograph 2.) Next, insert the short end of the TT-1003 tool into the door. (See illustration A.) As soon as the tool is below the base of the window glass, rotate it so that the tip of the tool is pointed toward the inside of the vehicle. Lower the tool until you feel it contact the upper horizontal linkage rod.

An inspection light can be used to help locate the linkage rod if you wish, but it is not absolutely necessary. The short end of the TT-1003 is exactly the right length to contact the linkage rod automatically as you lower the tool into the door. Once you have made contact with the linkage rod, twist the tool in order to bind the linkage and then lever the linkage rod forward to unlock the door. (See photograph 3.)

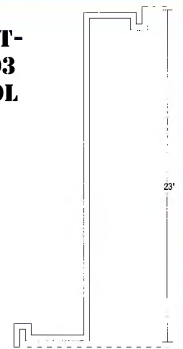
Inside the door, the two linkage rods run diagonally upward to a point just below the forward edge of the outside door handle. (See photograph 4.) At that point the two rods bend to become horizontal, with the inside lock control linkage rod being the upper of the two rods. While it is not visible in the photograph, the two rods actually cross over each other just forward from the door latch.

Because the inside lock control linkage crosses over the handle linkage, it will be slightly closer to the outside of the door than the handle linkage. This makes it very easy for you to locate the correct linkage rod by feel since the lock control linkage will be the first thing that the tool encounters as you lower it into the door. If you watch the inside lock operator for movement as you probe for the linkage rod, this will also help you locate the proper linkage more easily. 

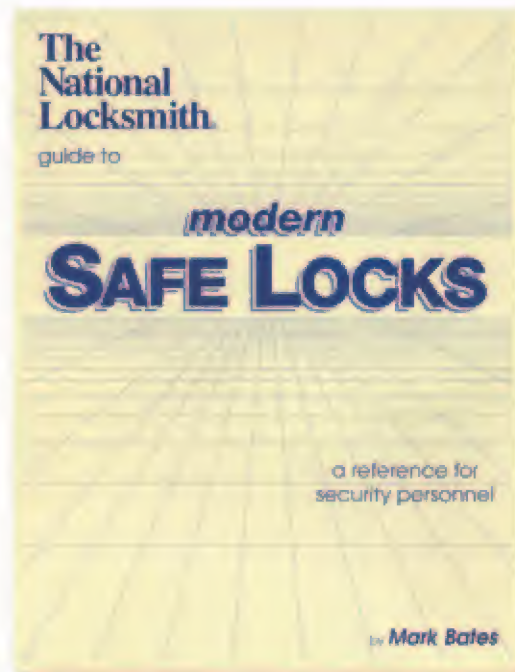
Quick Reference Guide

Vehicle: 2000 Chevrolet Impala	Code Series: S000A-S711K
Direction Of Turn: Clockwise (driver's side)	Lock Manufacturer: Strattec
Tool: TT-1003 (short end)	Key Blank: Iico B99-PT5, Jet B99-PHT
Lock System: 10-cut GM, sidebar ignition and plate-tumbler (wafer) style door locks	Bitting: Ignition : 1-9, Doors: 3-9, Trunk: 4-109, Glove Box: 7-10
Security System: PassKey III (transponder)	

A. TT-1003 TOOL



Modern Safe Locks



You always wanted to make money servicing safes?

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#MSL - 1

More Dispelling 10 Myths about Locksmithing

by John Robert

This is a continuing effort to bring practical advice to those in need.

Myth #1. Is it fair or professional to charge a friend or relative for my services? Yes or No?

Yes! In business you need to learn right away that you are running a business that needs to turn a profit. The profit made is put back into the business so you can reopen again the next day. Friends and relatives do not understand this business concept and are easily put out by it, especially if they have never been self-employed, so use diplomacy.

Myth #2. Am I obligated to provide reduced or discounted rates to friends or relatives? Yes or No?

No! You are under no obligation to give anyone a discount unless you have it in writing. It is a decision that you must make based on that particular situation. It has always been my policy that "I recognize no friends or relatives in business transactions". This policy does not win me any popularity contests. It has eliminated those who like to take advantage and I am able to provide continued service to paying customers.

Myth #3. Position in the yellow pages makes a difference on the amount of calls you receive. True or False?

False! A position in the Yellow Pages never guarantees the amount of calls you will receive. If you are listed near the front you have a better

chance of being called first. However, being near the front also puts you near or next to the larger display ads. This will make your ad seem almost obscure if all you have is an in-column ad.

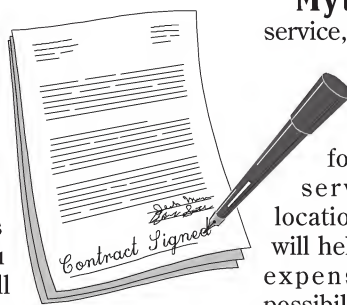
Myth #4. Display ads are better than in-column ads. True or False?

True & False! A display ad has a better probability of being seen and called on than an in-column ad. However, a display ad will usually cost 3-4 times more per month than an in-column ad does, which in turn cuts into your profits. This also triggers the idea that you will have to raise your prices to cover the larger ad. This should be an area that one approaches gradually and with much thought before placing an ad.

Myth #5.

When a customer signs a liability waiver does that mean I have no liabilities to think about. True or False?

False! There is no document you can provide that will completely absolve you from all liabilities. A company cannot have their liability signed away. They can, however, take precautions to deter possible legal actions. If a customer signed your waiver but later believed you were liable for damages, you may find yourself in court defending your actions. If a judge determines that you were at fault, then you are liable even with a signed waiver. Your



ultimate goal is be prepared and don't take any chances. Being prepared will show a judge that you do take precautions.

Myth #6. Car dealerships are good repeat businesses. True or False?

True & False! If you are willing to provide approximately a 50% discount off your retail price and wave your trip charge, then the dealerships will spread your name around and use your service. However, car dealers are always looking for someone to give them a better discount. So you may service dealers for years and then one day find your prices are considered to high, even though you are giving them a substantial savings, because someone else is willing to do it for even less. They can be repeat business, but not necessarily good business.

Myth #7. I'm only a mobile service, so do I really need a business plan? Yes or No?

Yes. A business plan properly crafted and followed can turn your mobile service into multiple retail locations. A carefully followed plan will help to cut down on unnecessary expenses and provide for the possibility of hiring employees.

Myth #8! Is it possible to start a locksmith business without borrowing money from a bank or lender? Yes or No?

Yes! It's not the ideal way to do it, but it can be done. That's what I did. I did not have a savings account but I



did have a checking account with about \$300 in it. I did work for other locksmiths for many years before I went out on my own. As extra money became available I would buy my tools. As the years passed I bought what I believed I needed to get started and also had a lot of practical experience. So when that day came I called it quits and started my business. I worked out of the trunk of my car. I also used my home phone for business calls until I could afford a separate line. I bought 1000 business cards for about \$30 bucks.

I traded some lock work with a friend of mine who made me up some flyers to pass around. Then I went out knocking on doors. That is how it began for me. I have never needed to borrow any money for the business. That is what my business plan did for me.

Myth #9. If I can't answer a customer's question won't that make me look like I don't

know what I'm talking about? Yes or No?

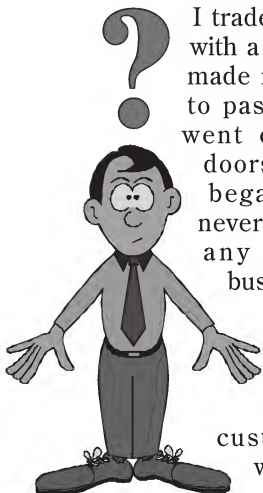
No! No one has all the answers to every customer's questions. Just simply saying "I don't know but I can find out" gives the impression that some things you know and what you don't know you will uncover. But make sure you do a follow up to their question.

Myth #10. Will I be able to support myself as well as my family being a locksmith? Yes or No?

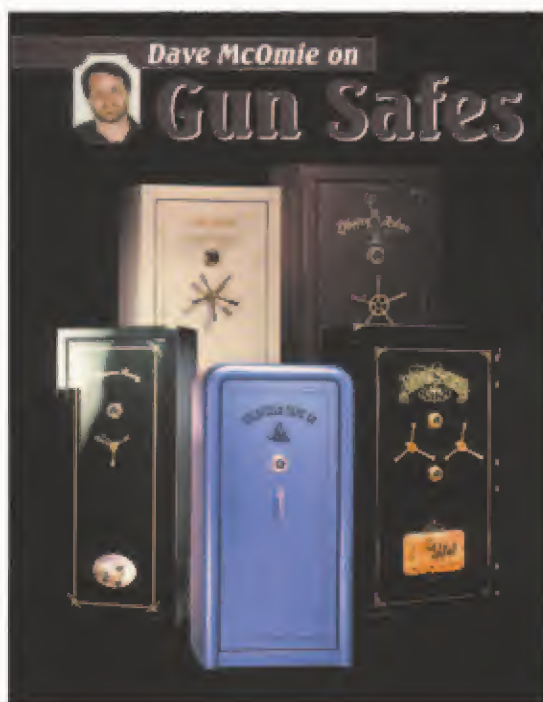
Yes! You will need to spend a lot of time looking for business before

it begins to pay off. You will experience many days of no work in sight. In the beginning there will be no end of the week paycheck. You will need to be able to think on your feet and learn to improvise. You must be teachable and be willing to listen. Ask a lot of questions. Treat each customer like they are your only call of the day. If you can stick with it for the first 5-6 years the returns will come.

This list only scratches the surface of what you will encounter. Stick with it and don't quit. **TNL**



Gun Safes

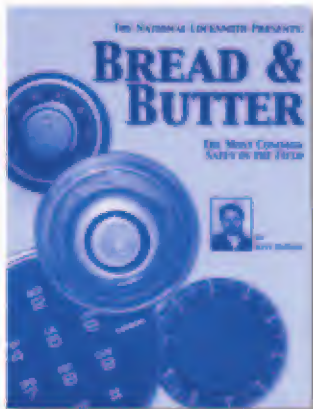


Need a drill point or relocker drill point on a gun safe?

CLICK HERE TO LEARN MORE

#GS - 1

Bread & Butter



CLICK HERE TO LEARN MORE

#BB - 01

BUSINESS BRIEFS

Locks Co.'s Safe Depot

There is a new safe distributor that just opened in the Southeast. The name of the company is Locks Co.'s Safe Depot. It is located in Atlanta, GA. Presently they are carrying American Security Products (AMSEC), Gardall Safes, and Mas-Hamilton digital safe locks. Their intention is to give competitive pricing and same day shipping to the entire U.S.

Changes at Framon

Things will be changing for Framon Manufacturing and their customers. Framon Manufacturing Company has formed a partnership with Somerset Security. Somerset Security will be the sole distributor of their products in the United States and Canada. Instead of shipping their products from Alpena, Michigan facility, all of their products will be warehoused in Somerset Security's New Jersey warehouse.

Somerset Security will also have a warehouse in California where their products will eventually be stored as well. Your local distributor will be purchasing Framon's products through Somerset Security instead of through Framon as in the past. Somerset Security will also be attending trade shows on their behalf.

Ron Perkins Joins Marray Staff

Ron Perkins has joined Marray Enterprises as Vice President, Marketing and Sales and will operate out of the company's San Diego office. Perkins has more than 15 years of extensive experience in the security, builders hardware and locksmith wholesale industries and previously served as Vice President, Marketing and Sales for OSI Security Devices.

CompX Agrees to Acquire Chicago Lock

CompX International, Inc. has announced that it has signed a definitive agreement to acquire the business of Chicago Lock Company for \$9.5 Million in cash, subject to certain price adjustments. Chicago Lock produces locks for vending, office furniture and other industries. The purchase price includes substantially all of Chicago Lock's operating assets excluding real estate.

Founded in 1920, Chicago Lock's products and customer base are complementary to those of CompX's existing National Cabinet Lock, Fort Lock, and Timberline Lock product lines.

M.A.G. Names New National Sales Manager

M.A.G. Engineering & Manufacturing Co., Inc. has named Gary Deter as the new National Sales Manager. Gary comes to M.A.G. with a professional sales management background, including over 20 years in the hardware industry.

Von Duprin's Guard-X Exit Alarm

Now in stock at Boyle & Chase is Von Duprin's new Guard-X exit alarm lock. Guard-X provides secure, alarmed code compliant protection for emergency exits. Guard-X readily identifies the door as an emergency exit and secures the opening against unauthorized use. It's heavy-duty design protect the internal mechanism and helps resist tampering or vandalism from inside the door.

For more information call: (800)325-2530. Circle #341.

Dorma Architectural Hardware

Fredric J. DiMartino has been named West Coast



regional sales manager for Dorma Architectural Hardware, a division of The Dorma Group North America.

In his new position, DiMartino will have direct responsibility for managing Dorma's western regional sales force. He will also assume responsibility for implementing individual sales and marketing plans for each territory.

Reading Body Works Web Site

Reading Body Works, Inc. has replaced their web site at www.readingbody.com.

New features include: Dimensions and Specifications; Request Literature; Markets They Serve; Rebates; What's New; Join our Mailing List; and their Warranty Registration.

Ultra Hardware Products, L.L.C. and Safety 1st

Ultra Hardware, L.L.C. formed a unique relationship with Safety 1st, a leading manufacturer of childcare and home security products. Ultra will take over the exclusive manufacture and distribution of products in the Safety 1st Home Security product line. Ultra will also distribute to its customer base juvenile products manufactured by Safety 1st. All products will continue to be sold under the Safety 1st brand name.

Jerry Heid Joins Zero International

Elias Wexler, president of Zero International, has announced the appointment of Gerard



(Jerry) Heid, AHC, as National Sales Manager for the Bronx, NY- based company. Previously with the Steelcraft Division of Ingersoll-Rand, Mr. Heid is now responsible for managing Zero's field sales and customer service organizations in support of all product lines.

Jerry Heid may be reached at: (513) 779-0777; Fax (513) 779-7741; E-mail: Zero@zerointernational.com.

RCI National Sales Manager

Rutherford Controls is pleased to introduce



Robert Chartrand, who will be handling the company's national sales division. Bob comes to RCI with extensive sales experience in the access control/alarm and locksmith industries. In addition, he has several years of hands-on experience in installation and technical service, offering RCI a strong level of expertise in the security market.

DoorKing Opens Chicago Office

Larry Wanat has joined DoorKing as Regional Sales Manager for the Midwest area and will work out of the company's new Chicago area sales office - DoorKing North. Wanat is a vehicle access control professional with more than 20 years of experience in the field.

Wanat can be reached at: (847) 884-7682 or fax (847) 884-7683.

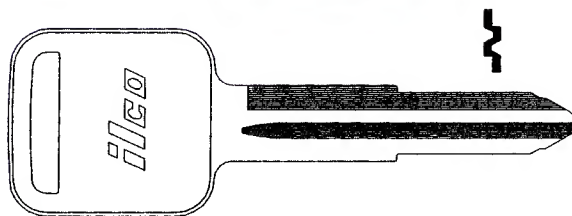


TNL

KEY CODES

Geo Series U0001-U2000, Part 1

The HPC 1200CMB and
1200PCH code cards for this
code series are between
pages 110-113.



Manufacturer: Geo
Code Series: U0001-U2000
Key Blanks:
Curtis: B70
Ilco: X184, X185
Ilco EZ: B65, SUZ15
Silca: GM19
Taylor: X184
Number of Cuts: 8
M.A.C.S.: 2
Key Gauged: Shoulder
Center of First Cut: .098
Cut to Cut Spacings: .083
Cut Depth Increments: .027

HPC 1200CMB
Code Card: CF88
Jaw: A
Cutter: CW-47MC
Gauge From: Shoulder
HPC 1200PCH (Punch):
PCH Card: PF88L, PF88R
Punch: PCH-47
Jaw: A
Silca UnoCode
Card Number: 264
HPC CodeMax
DSD #: 247
Jaw: A
Cutter: 47MC
Curtis No. 15 Code Cutter:
Cam-Set: DC-50
Carriage: TOY-50

Framon #2:
Cuts Start at: .098
Spacing: .0830
Block #: 5
Depth Increments: .027
Cutter: FC8735
Key Clamping Info: Use
flip-up shoulder stop.
A-1 Pack-A-Punch
Quick Change Kit: PAK-
G04
Punch: PKS-88T
Die: PKS-88T
ITL 9000 & 950
Manufacturer ID: 196

Spacings:
1 - .098
2 - .181
3 - .264
4 - .346
5 - .429
6 - .512
7 - .594
8 - .677
Depths:
1 = .327
2 = .299
3 = .272
4 = .244

U1	32423424	U39	44421121	U77	43122231	U115	33311124	U153	31334231	U191	31324342
U2	12421321	U40	33232211	U78	31112213	U116	43244423	U154	24442323	U192	42322124
U3	12323113	U41	32122324	U79	42312242	U117	21231322	U155	42344431	U193	43223434
U4	42443112	U42	42234432	U80	33244323	U118	22311344	U156	21344233	U194	21244433
U5	34442122	U43	31311312	U81	23442433	U119	43342344	U157	31342111	U195	43121321
U6	32432322	U44	33311321	U82	32113323	U120	12433113	U158	12312324	U196	33432121
U7	32113431	U45	43122444	U83	44313222	U121	22313323	U159	42231224	U197	31223323
U8	32134213	U46	33123443	U84	31213243	U122	11332434	U160	33311243	U198	11233432
U9	22213432	U47	33424321	U85	31332312	U123	42332344	U161	32124334	U199	43242242
U10	21134433	U48	12332231	U86	44243222	U124	33321213	U162	31213424	U200	12421331
U11	23424424	U49	12321343	U87	33421331	U125	33113342	U163	32231342	U201	42442431
U12	44231332	U50	33122132	U88	12431243	U126	33121244	U164	31244333	U202	42423112
U13	22211343	U51	22432132	U89	32221342	U127	42123432	U165	44323311	U203	32334431
U14	42213322	U52	42243443	U90	42421343	U128	43443331	U166	42342211	U204	32224334
U15	11243123	U53	33223244	U91	22313324	U129	44324422	U167	31221211	U205	43223313
U16	31231334	U54	22322131	U92	42321334	U130	13423133	U168	31342123	U206	23421121
U17	22432324	U55	43422234	U93	33312231	U131	24312321	U169	32342334	U207	24442321
U18	42243332	U56	21233221	U94	11311342	U132	31234443	U170	23422244	U208	33423134
U19	32312423	U57	42442343	U95	31244423	U133	32223123	U171	43243432	U209	22433122
U20	31223233	U58	43113223	U96	42313313	U134	12323443	U172	24323122	U210	21324234
U21	23424331	U59	22311242	U97	23344421	U135	21131342	U173	22324344	U211	13422313
U22	32442224	U60	31312321	U98	43423342	U136	32332111	U174	42322443	U212	33213242
U23	33122243	U61	43312422	U99	21123422	U137	23434431	U175	21243113	U213	31244231
U24	31244244	U62	43212344	U100	42342432	U138	21112323	U176	44432242	U214	22122131
U25	22113123	U63	43432432	U101	42243121	U139	43421334	U177	22131232	U215	21133134
U26	21132231	U64	32332221	U102	42132421	U140	42331242	U178	32134342	U216	31243222
U27	12233344	U65	43324331	U103	42234334	U141	43234232	U179	23434434	U217	43233112
U28	32233442	U66	21223444	U104	13431231	U142	13443121	U180	33321312	U218	21312432
U29	43311322	U67	43113313	U105	44344212	U143	42344322	U181	43243123	U219	32431224
U30	43423123	U68	42132442	U106	32233131	U144	32431242	U182	13421244	U220	32133212
U31	43433222	U69	22234213	U107	22133123	U145	43133111	U183	42312112	U221	44213312
U32	44432112	U70	42423124	U108	21313244	U146	13332123	U184	44212434	U222	43432431
U33	21213212	U71	42133232	U109	33422244	U147	13433111	U185	44324423	U223	32211342
U34	22132431	U72	21244224	U110	43112311	U148	42212211	U186	32233232	U224	22443133
U35	33312322	U73	43112122	U111	44332231	U149	42332124	U187	43113343	U225	12434224
U36	44324211	U74	32234213	U112	11122244	U150	44312212	U188	33133111	U226	32124343
U37	11342123	U75	44432224	U113	21334331	U151	32113343	U189	21342242	U227	44224334
U38	21223432	U76	21344331	U114	31322113	U152	43113213	U190	21112221	U228	13322122

Geo Series U0001-U2000, Part 1

U229	42431221	U262	33124313	U295	42133231	U328	32342321	U361	32213442	U394	44243233
U230	24322121	U263	23342232	U296	421133321	U329	43111334	U362	32221134	U395	22123111
U231	11224423	U264	32423344	U297	22433421	U330	42442131	U363	12433224	U396	42334244
U232	33134434	U265	43243324	U298	44422323	U331	22323324	U364	13334443	U397	12423124
U233	31312232	U266	11334321	U299	21224231	U332	31133421	U365	42122131	U398	32113243
U234	22332321	U267	43423133	U300	32324334	U333	33443244	U366	42334232	U399	11134334
U235	31344232	U268	31123132	U301	43212133	U334	32442122	U367	24432422	U400	22442131
U236	32133132	U269	31222132	U302	33132212	U335	12323313	U368	22122434	U401	24432124
U237	31332113	U270	32132232	U303	42113224	U336	13422133	U369	33421324	U402	22443324
U238	31221332	U271	22113113	U304	21223324	U337	44343322	U370	22134431	U403	44234324
U239	42311242	U272	31322123	U305	32444332	U338	44222112	U371	22134321	U404	23123111
U240	42433421	U273	43243423	U306	12311332	U339	11211242	U372	42423131	U405	43122312
U241	11332444	U274	42312433	U307	44332134	U340	21213431	U373	23432242	U406	31132124
U242	43324213	U275	12331324	U308	42122124	U341	21131234	U374	42423123	U407	31124432
U243	12424421	U276	21324322	U309	31112342	U342	42324333	U375	11322122	U408	21333422
U244	44324334	U277	11133223	U310	44243134	U343	43232213	U376	31322342	U409	43311243
U245	22423332	U278	13432133	U311	44421334	U344	22243123	U377	32112124	U410	43243134
U246	33223342	U279	42123322	U312	12432234	U345	42122442	U378	11123223	U411	21231331
U247	22234424	U280	22234442	U313	42133421	U346	33124211	U379	22334321	U412	22133432
U248	12431321	U281	44422331	U314	33442113	U347	32312434	U380	33243124	U413	11322442
U249	12443131	U282	31122432	U315	21323111	U348	33223422	U381	32132422	U414	12342111
U250	11322444	U283	44432421	U316	33212234	U349	13422334	U382	21332431	U415	31213231
U251	33232231	U284	31232134	U317	31332423	U350	23432432	U383	32122431	U416	43343243
U252	43111244	U285	32422342	U318	13422213	U351	21121322	U384	31122112	U417	32443433
U253	22323344	U286	32443224	U319	21243323	U352	44432324	U385	44342132	U418	32113321
U254	22323444	U287	33442124	U320	32342422	U353	33132124	U386	12322431	U419	43322313
U255	31133311	U288	43311242	U321	42312212	U354	22443433	U387	33243213	U420	22443244
U256	32242433	U289	44243123	U322	33423131	U355	43223234	U388	11212243	U421	23213112
U257	43111242	U290	32224433	U323	12444323	U356	42344332	U389	22233132	U422	32442244
U258	43131121	U291	44334423	U324	42233223	U357	42212234	U390	42112123	U423	12311231
U259	21133424	U292	44334332	U325	31321131	U358	12312332	U391	44212343	U424	13442334
U260	23433432	U293	32243233	U326	43133442	U359	44333123	U392	43431234	U425	13421132
U261	22132124	U294	34433122	U327	11134331	U360	42132244	U393	12332431	U426	42422132



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#SUB - 1,2,3,4,5,6

Geo Series

U0001-U2000, Part 1

U427	43233443	U499	12312422	U571	21333423	U643	21332312	U715	32113331	U787	44332423
U428	32243123	U500	24344222	U572	43224231	U644	33312424	U716	32442443	U788	21124424
U429	43313311	U501	44343242	U573	43311311	U645	42343421	U717	43344433	U789	22442231
U430	22432121	U502	31231331	U574	31213211	U646	43311312	U718	33123224	U790	43342211
U431	22333213	U503	32133211	U575	44243223	U647	44312334	U719	31344231	U791	44342324
U432	11223331	U504	22432334	U576	42134242	U648	13443124	U720	22123324	U792	12421344
U433	42212311	U505	12331334	U577	42122433	U649	31324423	U721	24432123	U793	44242131
U434	21312323	U506	24312221	U578	32433311	U650	12331242	U722	31113222	U794	43221311
U435	42442134	U507	22321344	U579	32344322	U651	44211322	U723	32423442	U795	21324431
U436	43211211	U508	23423243	U580	23433443	U652	13423244	U724	42123424	U796	31321312
U437	12442423	U509	33312432	U581	21211312	U653	33311244	U725	43222311	U797	43121231
U438	22132334	U510	42231211	U582	32422312	U654	42332324	U726	13421323	U798	24332423
U439	31211243	U511	43442134	U583	33443123	U655	42112322	U727	23334423	U799	42332244
U440	43334432	U512	31132212	U584	22434233	U656	42342111	U728	13112123	U800	33221234
U441	44242331	U513	43223422	U585	22113431	U657	32324311	U729	43421332	U801	31213442
U442	43123433	U514	43132234	U586	22112443	U658	21234232	U730	43321323	U802	12421132
U443	44232242	U515	22323313	U587	44243332	U659	42243433	U731	12312134	U803	42111322
U444	43322433	U516	11324213	U588	44342121	U660	42323423	U732	23332423	U804	33212342
U445	32334221	U517	31112212	U589	42313213	U661	31223321	U733	12311224	U805	42323322
U446	32331232	U518	43332231	U590	42322321	U662	42332111	U734	11223124	U806	43111331
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U448	33113134	U520	31213234	U592	42334421	U664	32422423	U736	12244331	U808	42432242
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U450	21243332	U522	44312124	U594	21243221	U666	32122442	U738	43223122	U810	12312344
U451	12224443	U523	11212443	U595	32433122	U667	32224424	U739	23444324	U811	11124334
U452	31212243	U524	12312232	U596	32234422	U668	11243431	U740	42433232	U812	43423243
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U457	32232133	U529	23432124	U601	44333422	U673	43334212	U745	22322331	U817	44213242
U458	32233124	U530	33422442	U602	44342312	U674	31131244	U746	12231321	U818	42211313
U459	42134232	U531	44433213	U603	44222342	U675	44222312	U747	44221121	U819	33423424
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U461	43242331	U533	32132134	U605	32242113	U677	21324331	U749	33222444	U821	42311322
U462	42433122	U534	44312323	U606	32124344	U678	33233211	U750	43432111	U822	33221132
U463	32211243	U535	21224443	U607	21231321	U679	23343111	U751	13442112	U823	22111342
U464	31134443	U536	43244211	U608	44223322	U680	21134222	U752	22211211	U824	33244322
U465	31342312	U537	34212112	U609	11332112	U681	22423444	U753	21234442	U825	21342422
U466	32442344	U538	13433131	U610	21311231	U682	43343421	U754	32312133	U826	31211322
U467	34332112	U539	32213433	U611	33424334	U683	13422234	U755	42133133	U827	21323342
U468	33233442	U540	31234334	U612	42132213	U684	21233213	U756	13433134	U828	13334423
U469	43422423	U541	22112133	U613	44312433	U685	42433311	U757	12332321	U829	11124431
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U471	42331124	U543	42313444	U615	11334432	U687	12243331	U759	11132123	U831	21244431
U472	42121132	U544	31223431	U616	12442313	U688	11322421	U760	44313113	U832	33423121
U473	12224324	U545	22123444	U617	33134234	U689	11123344	U761	21324311	U833	11313222
U474	11324231	U546	12323324	U618	22324342	U690	33123213	U762	32111343	U834	43431131
U475	42343322	U547	33234223	U619	22433442	U691	24422112	U763	42331312	U835	43342111
U476	31132112	U548	11233231	U620	33422123	U692	44334421	U764	23421334	U836	12344331
U477	31243221	U549	31342323	U621	32242231	U693	11334331	U765	31234321	U837	21343421
U478	32442343	U550	11221334	U622	33433124	U694	12213232	U766	22421321	U838	33221322
U479	44423433	U551	31232443	U623	44423224	U695	32123443	U767	32243431	U839	32431124
U480	31331321	U552	32321334	U624	43423423	U696	43322323	U768	32111234	U840	23443242
U481	12244421	U553	22121332	U625	33224213	U697	21324323	U769	22243132	U841	44221343
U482	33213132	U554	21321124	U626	12423344	U698	44332243	U770	21331231	U842	31213221
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U484	12132112	U556	43332232	U628	33132444	U700	12312133	U772	31124423	U844	42313211
U485	42344211	U557	42323422	U629	33424331	U701	13432224	U773	32432122	U845	44213424
U486	31342133	U558	33442334	U630	32113233	U702	13342112	U774	32421311	U846	12424331
U487	31311213	U559	13312124	U631	21334223	U703	32431134	U775	32334222	U847	44224234
U488	44212133	U560	44332123	U632	44332111	U704	42243234	U776	33312443	U848	12233422
U489	42442132	U561	12323124	U633	44321231	U705	21332213	U777	13422324	U849	12434433
U490	43244221	U562	42423321	U634	23424234	U706	43122211	U778	11322331	U850	21223121
U491	42112334	U563	32311234	U635	43321321	U707	43213431	U779	42243321	U851	33122124
U492	42124343	U564	33312221	U636	32332442	U708	12434222	U780	32443212	U852	11123124
U493	32312313	U565	43233113	U637	32434432	U709	43133113	U781	31224234	U853	33112423
U494	21324423	U566	31124422	U638	32131344	U710	21313342	U782	31342334	U854	43332111
U495	31223131	U567	33112434	U639	42344343	U711	33242311	U783	43344232	U855	22433132
U496	12322331	U568	13112124	U640	31312234	U712	44211344	U784	21211344	U856	31133131
U497	43443321	U569	42221313	U641	32234433	U713	43312324	U785	32442131	U857	43323322
U498	22431334	U570	21334431	U642	13344431	U714	32322313	U786	21243442	U858	11324334

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#AD - 1

U859	31112243	U895	33242431	U931	11313213	U967	21121124
U860	43422442	U896	33113444	U932	33234432	U968	31223334
U861	43312323	U897	23443222	U933	12312423	U969	43344234
U862	42443224	U898	22431321	U934	32321322	U970	42333422
U863	43321211	U899	44433212	U935	31322442	U971	22112124
U864	31231211	U900	32133232	U936	31123134	U972	43123224
U865	43111332	U901	43122423	U937	43443124	U973	11124323
U866	23342121	U902	31123131	U938	44312112	U974	24313112
U867	44311331	U903	43243212	U939	42311342	U975	33213212
U868	42331213	U904	42132243	U940	12443224	U976	21313323
U869	12312331	U905	32234434	U941	44433134	U977	22424431
U870	33113442	U906	21134442	U942	13342324	U978	32433244
U871	21133133	U907	23133111	U943	33231224	U979	43124221
U872	21223442	U908	44333423	U944	32131342	U980	11332443
U873	21131243	U909	44213113	U945	44233324	U981	11331231
U874	22213124	U910	44342131	U946	23422423	U982	43113421
U875	42122443	U911	42443243	U947	32124442	U983	22443134
U876	42223434	U912	44321134	U948	11211324	U984	12421313
U877	42221342	U913	42431244	U949	22213213	U985	31322244
U878	22342111	U914	21133442	U950	33213443	U986	31243113
U879	22432424	U915	21112234	U951	22334344	U987	33244312
U880	43334211	U916	44212432	U952	31124424	U988	22211321
U881	31133431	U917	44323322	U953	44313442	U989	33212134
U882	21312213	U918	32244231	U954	31342422	U990	42311232
U883	22131243	U919	22444224	U955	43342334	U991	33442121
U884	44224323	U920	32311322	U956	33133221	U992	33423342
U885	43334213	U921	21312321	U957	44322344	U993	33324211
U886	21134434	U922	21344321	U958	44313123	U994	32133213
U887	32211311	U923	44212344	U959	31233222	U995	31213321
U888	23422134	U924	31124344	U960	33234224	U996	44313124
U889	24332124	U925	23342221	U961	32422431	U997	21332324
U890	42431213	U926	11212343	U962	33222432	U998	43123213
U891	43132121	U927	13422444	U963	21123423	U999	32324321
U892	43344313	U928	32213422	U964	21333444	U1000	42213224
U893	11134321	U929	42442112	U965	12312122		
U894	21343422	U930	44231331	U966	44432232		

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This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGuard style round head.

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#JJ - 1

Access Control *with Sargent*

by Jake Jakubowski

It has almost gotten to the point that when someone mentions access control, we automatically put the word “electronic” in front of the phrase. Yet, viable access control systems can be mechanical as well as electronic in nature.

True mechanical access control systems can't give you audit trails, multiple user codes that can be added or deleted with the push of a couple of buttons, or the ability to selectively lock out - or admit - specific users at distinct intervals. What a mechanical access control system can do is secure a given door in such a way that the owner has the option of restricting entry through a particular door to the

times they want it used. Mechanical access control systems are a viable alternative to electronic systems when the security requirements of a facility do not demand audit trails, multiple user codes or variable entry demands.

Consequently, when the manager of a medical arts facility called and said they needed to bring a door into compliance with “the fire code” I was all ears. He wanted to know if I could install a lock that would keep people out at night and let them enter through the door during the day, I said I'd be over and talk to them about it.

The door that had the fire marshal's interest was a double door at the rear of the facility that as a designated fire exit, had two, too many locks on it. There was a slide bolt at both the bottom and the top of the active leaf of the door. And, there was a Schlage A53PD (entry function) on the door as well. As you might imagine, there were a bazillion keys out that would operate

the lock. And, most folks that left the facility at night would not lock the entry function knobset.

What the manager wanted was a lock that would allow daytime access from the outside, but at night would only allow people already in the building to exit, remaining locked when they left and the door closed behind them. “No problem,” I said, and proceeded to tell my contact that he didn't need an electronic access control system to regulate the traffic through this particular door.

I suggested a Sargent 8888 surface mounted panic/exit device (*see photograph 1*) along with a Sargent 88CLL, 10-line leverset for outside entry. (*See photograph 2.*) Because the door was a double door I recommended a Sargent 644 strike for the inactive leaf. (*See photograph 3.*) The 8888, of course, would secure the door and allow the door to lock every time it



1. A Sargent 8888 surface mounted panic/exit device bar and latch.



2. Sargent's 88CLL 10-Line exterior lever trim for the 8888 rim exit device.

3. Sargent's 644 strike installed after cutting astragal.



4. Shows the mounting bracket mounted to the 10-Line leverset.



5. Removing the screws that hold the bracket to the lever trim.

closed. Anyone exiting the building would have unimpeded egress to the outside - day or night.

The CLL designation on the outside leverset means that the lever can be locked or unlocked with the key. That is, when the key is used to unlock the lever, the lever is free to retract the latch on the panic device at all times. This is the mode that the door is left in during the daylight hours.

When the unit is locked, the lever is rigid and cannot retract the latch on the device. This prevents entry from the outside at all other times. Couple that with a restricted keyway (KeyMark) and the problem of innumerable duplicates is solved along with the problem of unauthorized entry after hours. Only management, security and maintenance carry a key for this door.

If you wanted a leverset where the key can retract the latch mechanism of the 8888, you would order a DLL.

Sargent's CLL is a rather different type of exterior trim package in that it is one half a 10-Line leverset chassis with a rim type panic device mounting bracket attached to it. (See *photograph*

4.) Photograph 5, shows me removing the screws that secure the mounting bracket to the 10-line chassis. Photograph 6, shows the 10-Line chassis with the spindle that operates the panic device's latch clearly visible. Notice the two chrome screws in the mounting bracket. These are the screws that attach the latch mechanism of the 8888 to the outside trim.

The mounting bracket does not have to be removed for installation of the trim. I simply did that to familiarize you with the components of this particular piece of hardware. What does have to be done though is to change the hand of the leverset. If you've never changed the hand of a Sargent 10-Line, you've got a treat in store. After the first time around, it's much easier then it looks here.

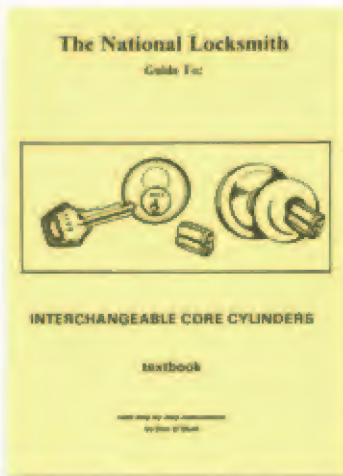
First use a poke tool to depress the retainer and remove the outside lever. (See *photograph 7.*) Since this one is just out of the box, there is no cylinder in the lever. If there were, you would have to insert the proper operation key, turn it 45° and then press the retainer.



6. Mounting bracket removed from CLL trim. Arrows point to two chrome-plated mounting screws.

Photograph 8, shows the lever and outside trim removed and the lever spindle and rose exposed. It is necessary to remove the rose - by pulling it down over the spindle - in to flip the clutch mechanism that will allow you to change the hand on this unit. The only thing holding the rose on the spindle is the same retainer

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#ICB - 1



7. Depress retainer to remove outside lever from spindle.



9. Depress retainer to remove rose from spindle.

that secured the lever. Depress the retainer and slide the rose over the end of the spindle. (See *photograph 9*.)

When you have the outside rose off the spindle and turn it over, you can see the clutch assembly (it has the lever return spring in it). The clutch is held in the rose by two clips - one in the top corner and another in the bottom corner - one of which can be seen in *photograph 10*. Remove the clips and the clutch comes out as seen in *photograph 11*. Just flip it over (left to right) and make sure the arrow that is stamped on the clutch is



8. Shows inner rose of lever set.



10. Clip in upper left corner of clutch and one in lower right corner hold clutch (return spring) assembly in place.



11. Clutch assembly out of rose and ready to be flipped to change hand of lever.

pointing in the direction the lever has to travel. There are corresponding arrows in the rose itself that say L.H./R.H.R.B (Left Hand or Right Hand Reverse Bevel) or R.H./L. H. R.B (Right Hand or Left Hand Reverse Bevel).

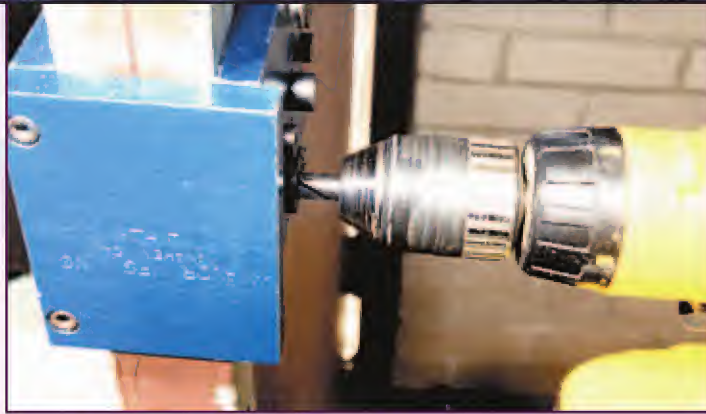
After reassembling the CLL trim, you're ready to take a look at the 8888-lock mechanism as seen in *photograph 12*. Obviously, the panic bar is not attached to the mechanism yet, but you can see the actuator arm (the



12. Sargent's 8888 latch body mechanism with cover trim in place.



13. Back side of latch body mechanism showing female actuator that lever set spindle fits into.



14. Drilling cross-screw post holes with Major's HIT-1.



15. Rasping holes larger to accept mounting bracket legs.

black arm on the left) of the device. *Photograph 13*, is of the back side of the 8888's lock mechanism and clearly shows the latch actuator that the CLL fits into which looks like this: +

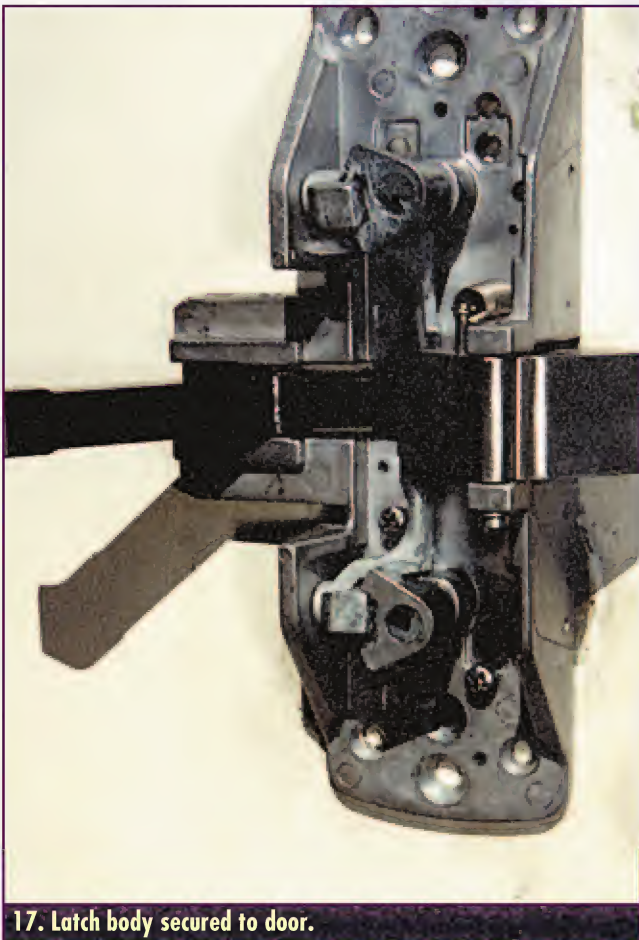
Installation

As I said before, the door had a Schlage A53PD on it and was already drilled for a 2-3/4" prep. What I had to do was drill for the cross-screw posts on the 10-Line trim. To make the drilling as accurate as possible, I got out my HIT-1 (by Major Manufacturing) and drilled the holes. (*See photograph 14.*)

After carefully drilling out the cross-screw post holes in the door, I chucked a round rasp into my DeWalt and enlarged the holes as you see in *photograph 15*. This only has to be done on the outside of the door and allows the prep to receive the 'legs' of the mounting bracket. As much as I hate to admit it: I did not take a



16. Stabilizing 8888 Latch body with TEC screws.



17. Latch body secured to door.



18. End bracket held in place with TEC screws pending drilling and placement of sex bolts.



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#ASA - 2000

picture of the CLL in the prep prior to attaching the 8888 lock mechanism.

Photograph 16, shows me driving self-drilling TEC screws through the holes in the latch body to stabilize the unit. If you will look at about the 2:00 position from the drill bit, you will see one of the mounting screws. *Photograph 17*, shows the 8888 attached to the door, and the two screws that secure the 8888 and the CLL together. In essence, this combination is 'through-bolted' to the door by way of the cross bore prep.

At this point, I depressed the actuator lever several times to make sure that the latch was retracting properly. Then locked, unlocked and operated the outside lever several times to make sure the latch on the 8888 was retracting properly.

Next, I slid the 'bar' over the actuator lever (the black arm sticking out of the latch body) and secured it to the latch body with the screws provided. I then secured the end bracket in place with a TEC screw while I drilled holes for 1/4 -20 screws and sex bolts. (See *photograph 18*.)

After putting the cover on the end bracket, I placed the trim cover on the latch body. After putting the cover on the end bracket, I placed the trim cover on the latch body as seen in *photograph 1*. Before 'buttoning up' the latch body trim cover and the end bracket cover, I once again checked the operation of the panic device to make sure nothing was binding and everything worked as it was supposed to.

After mounting the CLL and the 8888, I installed Sargent's 644 strike, which can be seen in *photograph 3*. By waiting until this point to install the strike, I made sure that the strike is properly positioned to receive the latchbolt. In this case I had to cut the astragal (the vertical piece of steel) in order for the strike to be at the proper depth to receive the latchbolt.

Photograph 19, shows a full-length view of the Sargent 8888 surface mounted panic/exit device after installation. The 8888 is all stainless steel with a black push-pad. About halfway between the right end of the pad and the end-bracket cap is the dog down mechanism. The dog down allows the 8888 to be placed in an open-at-all-times mode for unimpeded entry or egress - even if the outside lever is rigid.



19. A full length view of the Sargent 8888 surface mounted panic/exit device after installation.

Finally, *photograph 20*, shows the completed installation of the outside mounted Sargent CLL 10-line leverset and latch guard. Since the outside trim was larger on the Sargent CLL then it was on the Schlage knobset, I had to grind a deeper radius on the Latch Guard.

The Sargent 8888 Rim Exit Device carries a retail price of \$695.00. The CLL has a suggested list of \$175.00 and the 644 strike I sell for \$20.00. All of the above products are available from most of your favorite distributors. If you have difficulty locating any of the products listed here, call Dugmore & Duncan (800) 232-1595, they're a full line Sargent distributor and can help you with just about any Sargent product or product information.

Why would I recommend and install such high-dollar hardware? Three reasons: first, the profit per unit is higher, which means that my return-on-investment is greater. I can put more shekels in my pocket on a percentage basis than I can by selling less expensive hardware. Secondly, I can guarantee the installation - exclusive of abuse, etc. - knowing that the better quality product is going to out-perform import or domestic look-alikes. And, finally, it is easier to sell 'down' then to sell up.

I start out with what I perceive to be the best (and, for me, the most



20. Outside view of the Sargent 88CLL 10-line leverset installation and latch guard.

profitable) product. If the customer objects to the price then I can go down to a lesser grade product and show the customer what he stands to lose in the way of benefits as the initial costs go down.

For more information on Sargent products, circle 288 on Rapid Reply. **TNL**



**BY
RANDY MIZE**

If Peterbilt had a little cousin its name would be Ford Excursion.

Introduced for 2000, this family vehicle is every bit a Ford Expedition on steroids, standing head and shoulders to any SUV currently on the roads of the US. In fact, its been said that there doesn't yet exist a legal parking spot to accommodate this mammoth.

Needless to say, for locksmiths, this is a pleasant change of pace.

Gone, we hope, are the days of the ultra super lightweight compact with their ultra super lightweight compact doors.

Where the ignition lock accounted for 60 percent of the vehicle's gross weight, and reaching into the door to remove a lock was more akin to stuffing one's hand into an Isotoner Glove filled with razor blades, broken glass and nails.

With the Excursion, small is gone and big is in. There's no bloody knuckles working on this truck. Instead, expect to need a stepstool or ladder.



— KEY GENERATION —



Once a working key is made, Ford's New Generation Star (NGS) programming tool is needed to program a transponder key that will start the vehicle. Although expensive, it a necessary tool for serious automotive locksmiths.

1. Generating a key on this vehicle is similar to other Ford products using the 8-Cut system. Using a depth reading tool (i.e. EZ Reader, Determinator, or SKT Wafer Reader), obtain the depths of the first six cuts from the door lock. Then progression the last two cuts through the ignition. In most instances, generating the mechanical key will take about 15 minutes.



Photo courtesy of Saber Tool Company, Inc.



- 4.** To connect the NGS unit to the vehicle, first locate the Data Link Connector or DLC. On the Excursion, it is located on the driver's side of the cockpit, near the right knee area. It is fully exposed and has a cover saying "Data Link Connector."

After removing the DLC cover, connect the NGS's DLC into the plug. **5.**



- 6.** With the DLC connected, begin programming the new key or adding another key. Remember it is necessary to have the NGS key programming card updated to the most current version in order to program the 2000 and up models.

As every card version has a different programming menu or procedure, follow the correct procedure for your version card.



Removing the ignition is also similar to other Ford 8-cut vehicles. No column or column shroud disassembly is required. **7.**

Simply insert a working key, pick, or drill the lock. Turn to the ON or RUN position.

From beneath the column insert a probe through the lower shroud's access hole, depress the lock retainer and remove the lock.



— **IGNITION LOCK REMOVAL** —

Photo courtesy of Saber Tool Company, Inc.

The door lock on the Excursion is part of the door handle, and is the same design that is used on Ford's full-size F250 and F350 truck lines. In order to remove the lock for service or repair it is first necessary to remove the entire lock handle. Fortunately, this procedure is fairly easy and requires few tools.

8.



— DOOR LOCK REMOVAL —



9. The first step to door lock removal is removing the door panel. This procedure takes a few small, but simple steps, so work carefully.

Begin removing the panel by prying up on the top edge of the door lock button panel (near the mirror adjustment switch) found in the armrest area. Gently work the panel up and out of the armrest area. Disconnect all electrical connectors.

10.



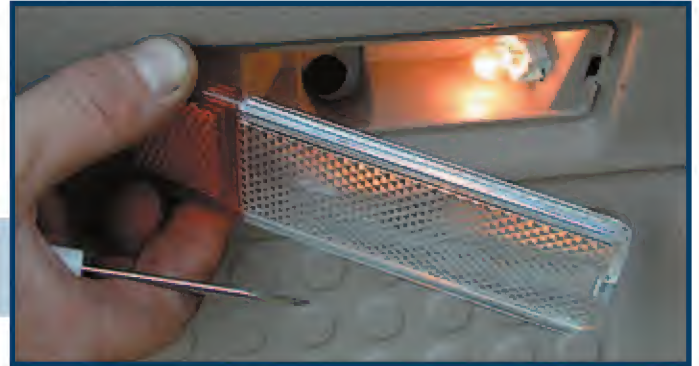
11. Once the panel is safely removed, use a 7mm socket to remove the single bolt found inside the panel area.



Going to the bottom corner of the door panel, remove the lens of the interior footlight. This can be accomplished with a little gentle prying and some help from a small straight blade screwdriver.

13.

12. Next, locate the trim piece covering the exterior side mirror mounting screws, found at the top hinge side of the door panel. Gently pry out to remove the trim.



14. Inside the light cavity, there is another 7mm bolt. Remove the bolt.



15. Now, gently LIFT the panel up and away from the door. Do not use a trim tool or your hands to pry the panel from the door. Disconnect all electrical connectors.



Looking up into the door cavity at the door handle, two retaining nuts can be seen at the opposite corners of the handle. While they are visible, moving the window guide or track makes access and removal of these nuts much easier.

16.

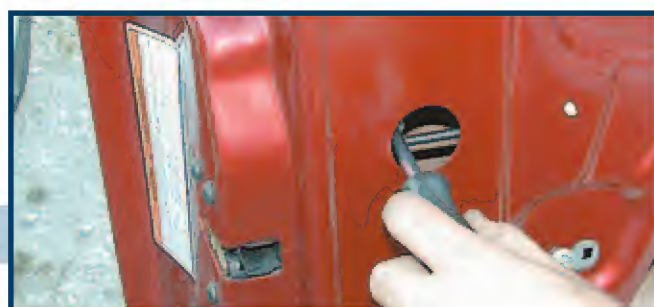


17. Use a 10mm socket to remove the track's mounting bolt, and move the track.

With the window track out of the way, the handle retaining nuts can now be removed. To access the upper nut, a rubber plug or grommet must be removed. This plug is located on the latch edge of the door, up at the top side of the door handle. **18.**



19. With the plug removed, use a 12mm socket to remove the handle's upper retaining nut.



Then remove the lower nut. **20.**



21. With the nuts removed, the handle can now be removed.



After disconnecting the lock linkage, the whole handle can be separated from the vehicle. **22.**

To remove the lock from the handle, simply pull this clip off and slide the lock from the handle. **23.**



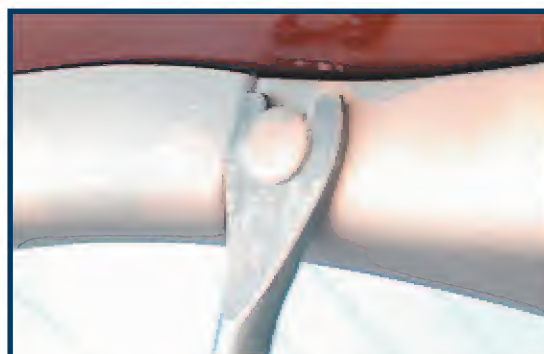
24. The door lock is removed and ready to be serviced or replaced.

Removing the tailgate lock appears more intimidating than it proves to be difficult. After removing the inside door trim the lock and its accompanying trim are easily removed. **25.**



26. The lock is part of the exterior trim piece that is attached to the window. In order to remove the lock, this outer trim piece must first be removed.

27. A closeup of the lock shows the concave trim into which it is encapsulated.



28. To begin lock removal, open the tailgate window and remove the interior trim panel. Small retaining clips are found on both the left and right side edge of the panel. Be careful. Even with this clip removal tool, the clip was easily damaged upon removal



29. With the clips removed, the window handle needs to be removed. Use a small straight blade screwdriver to pry out the small plugs or covers that house the handle's retaining screws.

Use a T-30 Torx driver to remove the handle's screws. **30.**



31. Carefully lower the panel. With the tailgate fully up, you can see just how high the rear of this vehicle is.

The trim piece into which the lock is installed is held to the body via seven 12mm nuts. After removing the nuts, gently pry the trim piece from the body. A seal or gasket surrounding the edge of the trim made lifting the piece a little difficult. Be careful not to tear the seal. **32.**



33. With the trim piece down, remove the clip that holds the lock in place and remove the lock.

The tailgate lock removed. **34.**



— EXCURSION SPECIFICATIONS —

Key System: Standard Ford 8-Cut

Security: PATS II system. Requires NGS for creating and duplicating keys.

Key Blank:
Strattec - 598333
BWD - 96PT

Door Lock:
Strattec - 703362

Ignition Lock:

Strattec - 706355 (uncoded)
BWD - LC6180 (coded with transponder keys),
or LC6177U (uncoded lock)

Tailgate Lock:
Strattec - 706228

Service Kits:
Strattec - 703373
BWD - SK5011

For more information on Ford's NGS tool and the SKT Wafer Reader, go to Saber Tool Company's web site, www.sabertool.com, or write to Saber Tool Company, Inc., 2511 W. Schaumburg Rd., PMB 213, Schaumburg, IL 60194. **TNL**

**Taking
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**TEST
DRIVE!**

As we all know, the key duplicating machine is the heart of any locksmith business. With the number of key machines currently available from both foreign and domestic manufacturers, it can be a bit exhausting to decide which one will best suite your needs. The best advice I can give you is to try as many as you can before you make that decision. The best way to do that is at a regional or national trade show. If you don't have that option, then comparing feature for feature is your next best alternative. The Curtis 2200 semi-automatic key machine offers a number of features bundled in a low cost package.

FEATURES:

The 2200 features a long throw carriage, carriage handle and lever, carriage lock trigger, 4-way vice jaws, vice jaw wing locking nuts, on/off power switch, cutter safety shield, nylon deburring brush, circuit breaker, 1/4 hp motor, one piece keying gauge, adjustable cutter stylus guide, CU20-C cutter, safety hood and die cast base to name a few.

CONSTRUCTION:

The 2200 is 5-1/2" wide by 15" deep by 9" high and weighs about 35 pounds. It's built on a solid die cast base and carriage featuring a vice jaw to vice jaw spacing of 3.25". This allows the ability to clamp and cut all key blanks except for those of extreme length. The vice jaws are also 4-way locking to allow key blank clamping on all four sides of the jaws, which will accommodate just about any key broaching. The carriage lever allows for a smooth easy control of the carriage assembly. The carriage assembly drops down and locks when in the neutral position



Curtis 2200 Semi- Automatic Key Machine

*by Curtis
Industries, Inc.*

and releases with the pull of a trigger positioned under the carriage. The key gauge is stamped from steel and spring loaded to automatically flip up and out of the way when released. The cutter guide safety shield reduces the risk of cutting a finger or from flying brass slivers, which always manage to find a way into your eyes. The included nylon deburring brush is convenient to have right on the machine. The stylus guide is easily adjusted to assure an accurate depth of cut. The built in circuit breaker protects against a circuit overload that could save a motor.

PRICE:

The locksmith price for this 2200 semi-automatic key duplicator is \$749.95. That includes allen wrenches and a series of cut keys that were cut on the machine and represent the accuracy of the adjustments. The keys are reproductions of factory-dimensioned pattern keys and are accurate to .002" or less. By measuring across the cuts with a micrometer, you can see if the machine is cutting too deep or too shallow, indicating if an adjustment of the cutter guide is necessary.

CONCLUSION:

This is a well built key duplicating machine at a very affordable price. It

does not offer the same level of safety features as some of the other key duplicating machines, however, it will prove to be far less expensive as well. About the only for of a complaint I could make is it would be nice to have a more powerful motor with more torque. However, that is only a personal preference. The 1/4 horsepower motor supplied was very adequate, but I am a power cutter who expects the machine to keep pace. When driven hard the 2200 would jam, requiring me to slow my pace so the cutter could cut. A more powerful motor along with a carbide cutter would greatly reduce this occurrence. Out of the box this is a fine machine that will satisfy all but the most discriminating buyers and if driven hard enough, any key duplicating machine will jam, even if equipped with a 1/2 horsepower high torque motor and a carbide cutter.

For more information on Curtis products contact:

Curtis Industries, Inc.

6140 Parkland Blvd.

Mayfield Heights, OH 44124

Phone: 800-555-5397.

Fax: (440) 446-0560

Web: www.curtisindustries.com

Circle #301 on Rapid Reply.



IN SUMMARY:

IN SUMMARY: The Curtis 2200 is a semi-automatic key machine.

COMMENTS: The Curtis 2200 Semi-Automatic key machine offers a number of features bundled in a low cost package.

TEST DRIVE RESULTS: This is a well built key duplicating machine at a very affordable price.

PRICE: \$749.95